



WEST SOUND
WATERSHEDS COUNCIL

West Sound Watersheds Council 2011 Three-Year Work Plan Update

Salmon recovery involves a complex set of actions and interactions that are both directed by the Recovery Plans and by the reality within each watershed. The three year work plan is one tool used to reflect those complex interactions.

The purpose of the work program update is four-fold: 1) to provide a forum for watershed groups, the Recovery Implementation Technical Team (RITT), and Puget Sound Partnership (PSP) staff to discuss the work, status, and needs of salmon recovery in each salmon recovery watershed chapter and regionally; 2) to have a tool that documents the work, status, and needs of salmon recovery per each salmon recovery watershed chapter for the next three years that can be rolled up into a regional statement of the funding and capacity needs, current status, and existing work underway; 3) to be a tool for identifying priority projects for current and future funding opportunities; and 4) to document changes in the implementation of each salmon recovery watershed chapter.

The components of the 3 Year Work Plan are a spreadsheet of priority projects and programs that can be started within three years (2011, 2012, 2013), and a narrative. The narrative describes the progress, changes, and status of recovery implementation and the work program since the previous year's update.

Spread sheet of Priority Projects and Programs

This spreadsheet is attached as an excel file. The color coding is as follows:

White: no change from 2010

Yellow: new project added in 2011

Green: active project (some funding)

Blue: completed

Orange: new information or updates to existing projects.

For more information about many of the projects, including photos, maps and project sponsor information, please see the Habitat Work Schedule site at: <http://hws1.ekosystem.us>

Narrative

1. What are the actions and/or suites of actions needed for the next three years to implement your salmon recovery chapter as part of the regional recovery effort?

The primary hypothesis that forms basis for the suites of actions proposed for Chinook recovery in this update is that the **nearshore habitat is the highest priority for investment** in this lead entity. Many of the projects and programs proposed in the next three years are targeted at protecting or restoring quality nearshore habitat.

We have also been investing salmon recovery dollars in the documentation of existing freshwater ecosystems through "water typing" in selected West Sound streams. We began in the North Kitsap area in 2010, chosen because of the desire to preserve forest and wetland ecosystem connectivity and the potential for large scale land use changes. The first field season was focused on the Miller Bay watershed, and continues in 2011 in the Carpenter Creek watershed. Wild Fish Conservancy is conducting the work, and found amazing inaccuracy in the existing Dept. of Natural Resources maps. Please read the attached presentation, which summarizes some of the Miller Bay findings.

The East Kitsap and South Sound chapters of the *Salmon Recovery Plan* need to be updated to address the freshwater, multi-species recovery actions.

2. What is the status of actions underway per your recovery plan chapter? Is this on pace with the goals of your recovery plan?

We did not have 10 year goals not identified specific actions in the *Salmon Recovery Plan*. We believe that the Action Agenda update in 2011 will identify many goals that will serve us in future planning endeavors.

The Shoreline Master Program (SMP) updates currently underway in Kitsap County and the five cities in the lead entity are critical regulatory processes for salmon recovery. The City of Gig Harbor will be the first to submit their draft SMP to the Dept. of Ecology, scheduled for December 2011.

3. What is the general status of implementation towards your habitat restoration, habitat protection, harvest management, and hatchery management goals?

Habitat Restoration:

Chico Creek:

The Chico Creek instream restoration project phase 1 was completed in 2008 and phase 2 will be completed in 2011. This instream restoration is taking place in the lower mile of the watershed, on a private golf course that has been channelized since 1924.

The largest restoration planned in our watershed is opening the Chico Creek estuary. Washington State DOT (WSDOT) built Highway 3 in the early 1960's, primarily as a link between the Naval Shipyard in Bremerton and the Bangor Submarine Base on northern Hood Canal, as directly as possible. To that end, they filled the salt marshes and the estuary, and put the creek in 2-8 foot wide, approximately 500 foot long culverts and channel. The culvert under Hwy. 3, and at the County's Kitty Hawk Road, just downstream, are partial fish barriers with one of the state's highest "Priority Index" for fish passage. Planning is well underway to replace the Highway 3 culvert with a large bridge, led by the WSDOT. The Kitty Hawk culvert and road abandonment effort is led by the Suquamish Tribe. The tribe has secured funding and the construction to remove the Kitty Hawk culvert should take place in 2012.

Carpenter Creek:

This is a straight forward project that was identified and funded in 2002 by the SRFB and the US Army Corps of Engineers, near Kingston, in Central Puget Sound. The Washington Dept. of Fisheries installed an 8 foot tide gate at this location as a satellite "fish farm" in the late 1950's. There was, and still is, a fairly pristine 26 acre shallow estuary at this site, obvious habitat for juvenile migrating salmonids. The fish farm didn't prove to be workable, and the tide gate has remained in place, restricting tidal flow and stranding salmon and other species inside the culvert for almost 50 years. The plans are to replace the culvert with a 90 foot bridge. This project was included in the 2010 legislative capital budget and construction will begin in June 2011.

Misc. Nearshore:

There were two restoration projects on Bainbridge Island (Strawberry Plant Park and Pritchard Park East Bluff), and one on Miller Bay (Indianola Culvert Replacement) that were completed in the last year. There are also nearshore projects in design phases proposed in all the East Kitsap Peninsula inlets, the Gig Harbor and Key Peninsulas, and most of the islands in WRIA 15.

The lead entity has been discussing how to prioritize nearshore restoration and protection projects, but the projects continue to be more opportunistic than strategic. The "WRIA 15 KGI Nearshore Prioritization Report" project was a salmon recovery project funded and recently completed to address this issue. The report identified 65 locations for protection or restoration.

Freshwater: We do not have funding available for the freshwater restoration projects that would protect the Puget Sound steelhead that are known to inhabit our small streams and bays. We do expect that the water typing project described above with help define the status and trends of the Kitsap steelhead.

Habitat Protection:

A large part of the habitat protection focus is on the Shoreline Management Plans updates, described above.

We also are working more closely with our local land trusts (Bainbridge Island and Great Peninsula Conservancy) on conservation and restoration opportunities through easements and other tools for habitat protection. The Bainbridge Island Land Trust has a large intact shoreline acquisition proposed for funding in 2011.

Harvest and Hatchery Management:

We have no identified harvest or hatchery activities associated with the *Salmon Recovery Plan*, however we are starting to link habitat restoration projects with volunteers doing salmon spawning surveys (Bainbridge) and small scale hatchery supplementation to compliment small stream restoration (Bainbridge and Manchester).

The lead entity has identified hatchery policies that seem to be in conflict with salmon recovery plans. These include the release of unmarked rainbow trout fry and fingerlings into lakes in the Chico Creek watershed, and not allowing any of the almost 25,000 chum salmon that returned to Minter Creek to spawn in the watershed, presumably because of fish pathogen concerns. Hopefully we can resolve these issues in 2011.

4. What are the top implementation priorities in your recovery plan in terms of specific actions or theme/suites of actions? How are these top priorities being sequenced in the next three years? What do you need to be successful in implementing these priorities?

The top priorities are adequate protection of the nearshore through SMP updates, completion of the Chico Creek estuary restoration, and integration of salmon recovery with the Puget Sound Action Agenda.

What we need to accomplish these goals is consistent funding for coordination of actions, and technical support for local jurisdictions.

5. Do these top priorities reflect a change in any way from the previous three-year work program? Have there been any significant changes in the strategy or approach for salmon recovery in your watershed? If so, how & why?

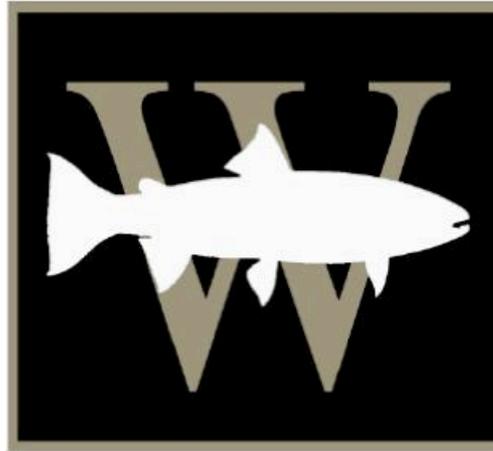
There have not been any significant changes.

6. What is the status or trends of habitat and salmon populations in your watershed?

We continue to struggle with land use issues, similar to other developing areas of Puget Sound, and do not have adequate information on the status and trends of our salmon and steelhead populations.

7. Are there new challenges associated with implementing salmon recovery actions that need additional support? If so, what are they? There are no new

challenges. Salmon recovery in our West Sound watersheds is synonymous with protection and restoration of our lowland streams and nearshore.



Wild Fish Conservancy

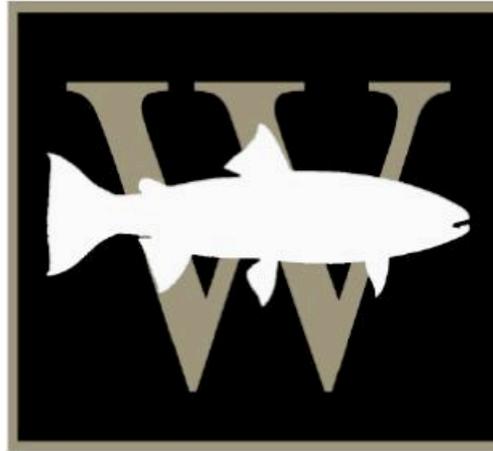
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P R E S E R V E P R O T E C T R E S T O R E



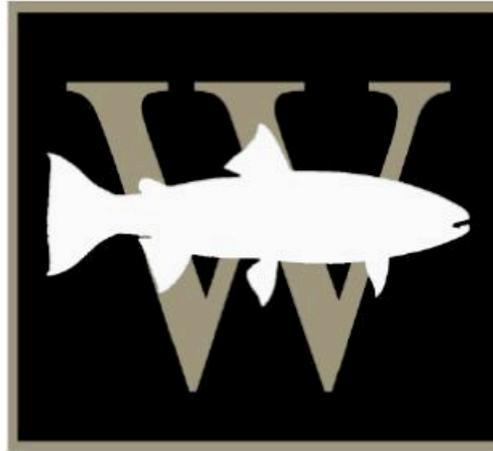
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S C I E N C E E D U C A T I O N A D V O C A C Y

Jamie Glasgow, M.Sci.

Director of Science and Research



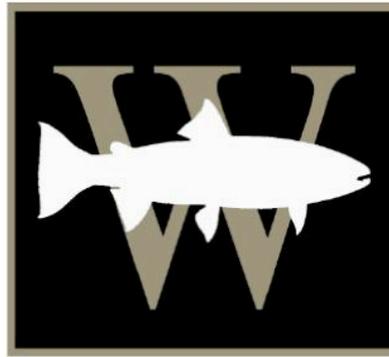
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S C I E N C E E D U C A T I O N A D V O C A C Y

Field Biologists

Brent Trim and Frank Staller



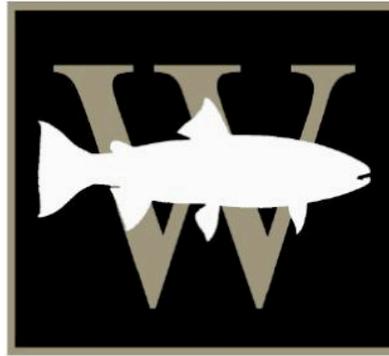
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**Preserve, Protect and Restore
Wild Fish and their Habitats**

Science, Education, and Advocacy



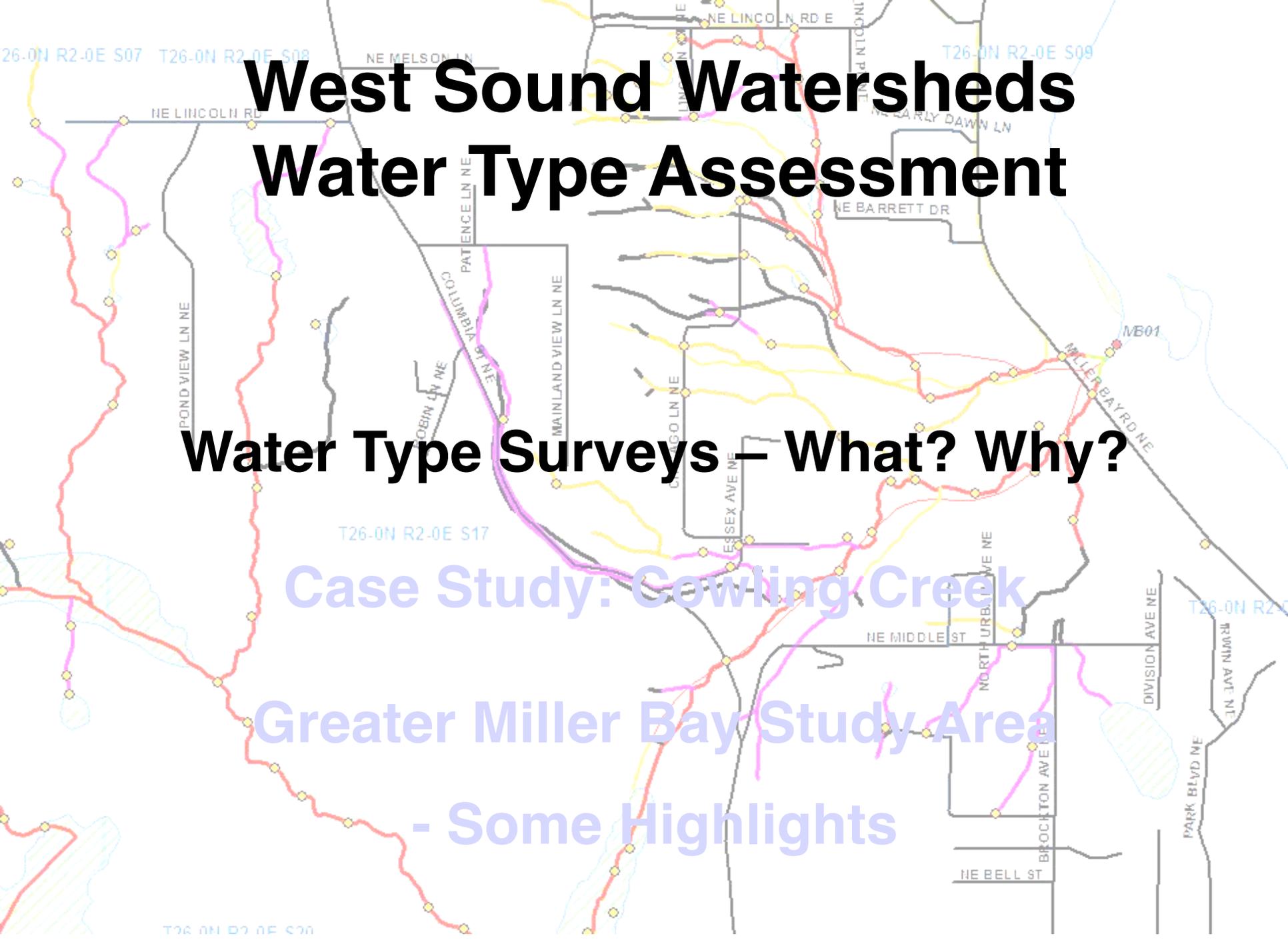
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**Preserve, Protect and Restore
Wild Fish and their Habitats**

A Bridge between Science and Policy

A map of the West Sound Watersheds area, showing various streets and water bodies. The map is overlaid with colored lines representing water type assessment data. The colors include red, yellow, pink, and purple. The map also shows several water bodies, some of which are shaded with diagonal lines. The text 'West Sound Watersheds Water Type Assessment' is prominently displayed at the top in large, bold, black font. Below it, the text 'Water Type Surveys – What? Why?' is also in large, bold, black font. Further down, the text 'Case Study: Cowling Creek' is in a smaller, blue font. Below that, the text 'Greater Miller Bay Study Area' is in a larger, blue font. At the bottom, the text '- Some Highlights' is in a smaller, blue font. The map includes street names such as NE LINCOLN RD, NE MELSON LN, NE BARRETT DR, NE MIDDLE ST, and others. It also shows grid lines for T26-0N R2-0E S07, S08, S09, S17, and S20.

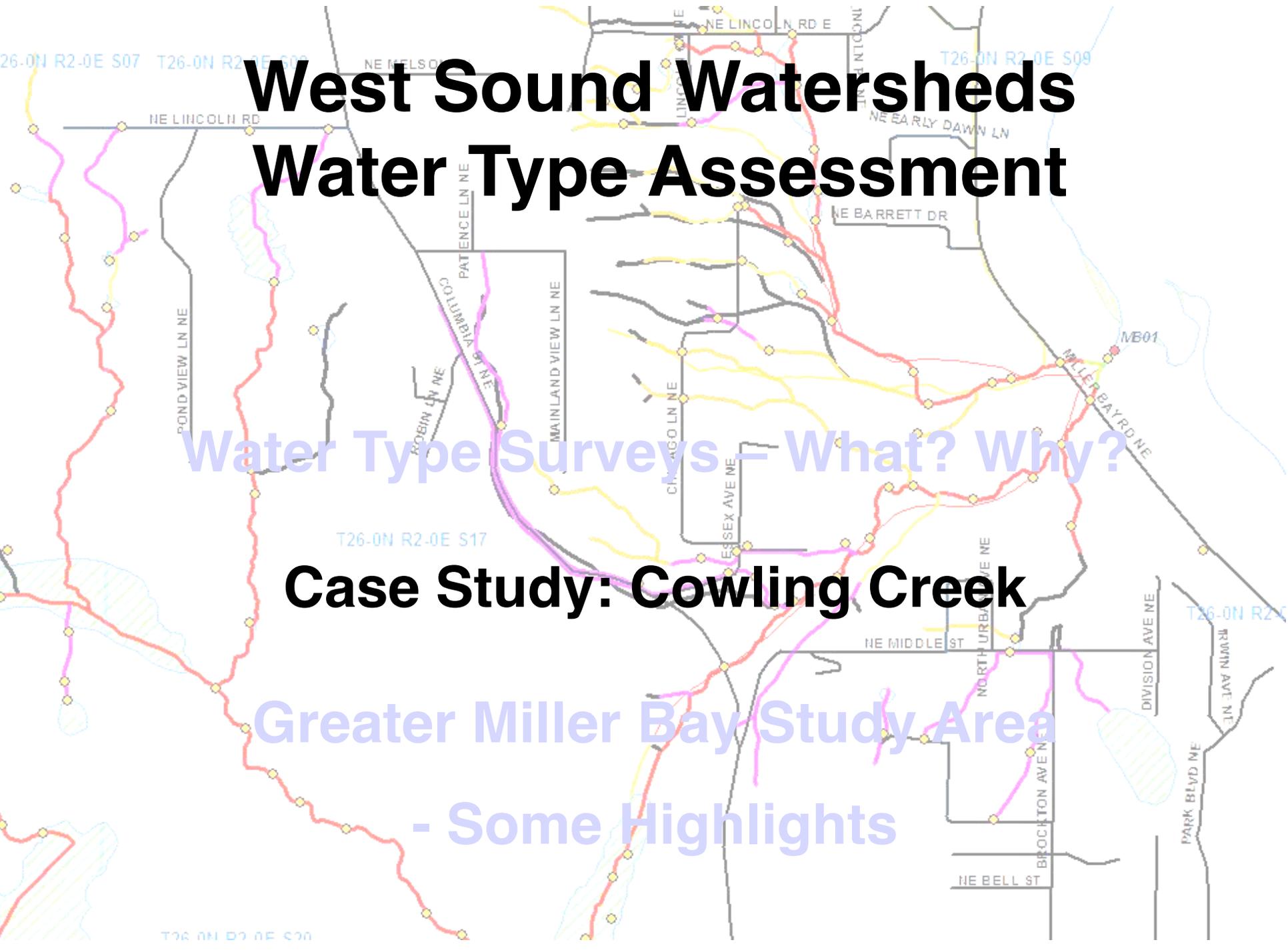
West Sound Watersheds Water Type Assessment

Water Type Surveys – What? Why?

Case Study: Cowling Creek

Greater Miller Bay Study Area

- Some Highlights

A map of the West Sound Watersheds area, showing various streets and water bodies. The map is overlaid with colored lines representing water type assessment data. The colors include red, yellow, orange, and purple. The lines follow the paths of creeks and rivers, with some lines having small yellow diamond markers. The map also shows several residential streets and a highway (MB01).

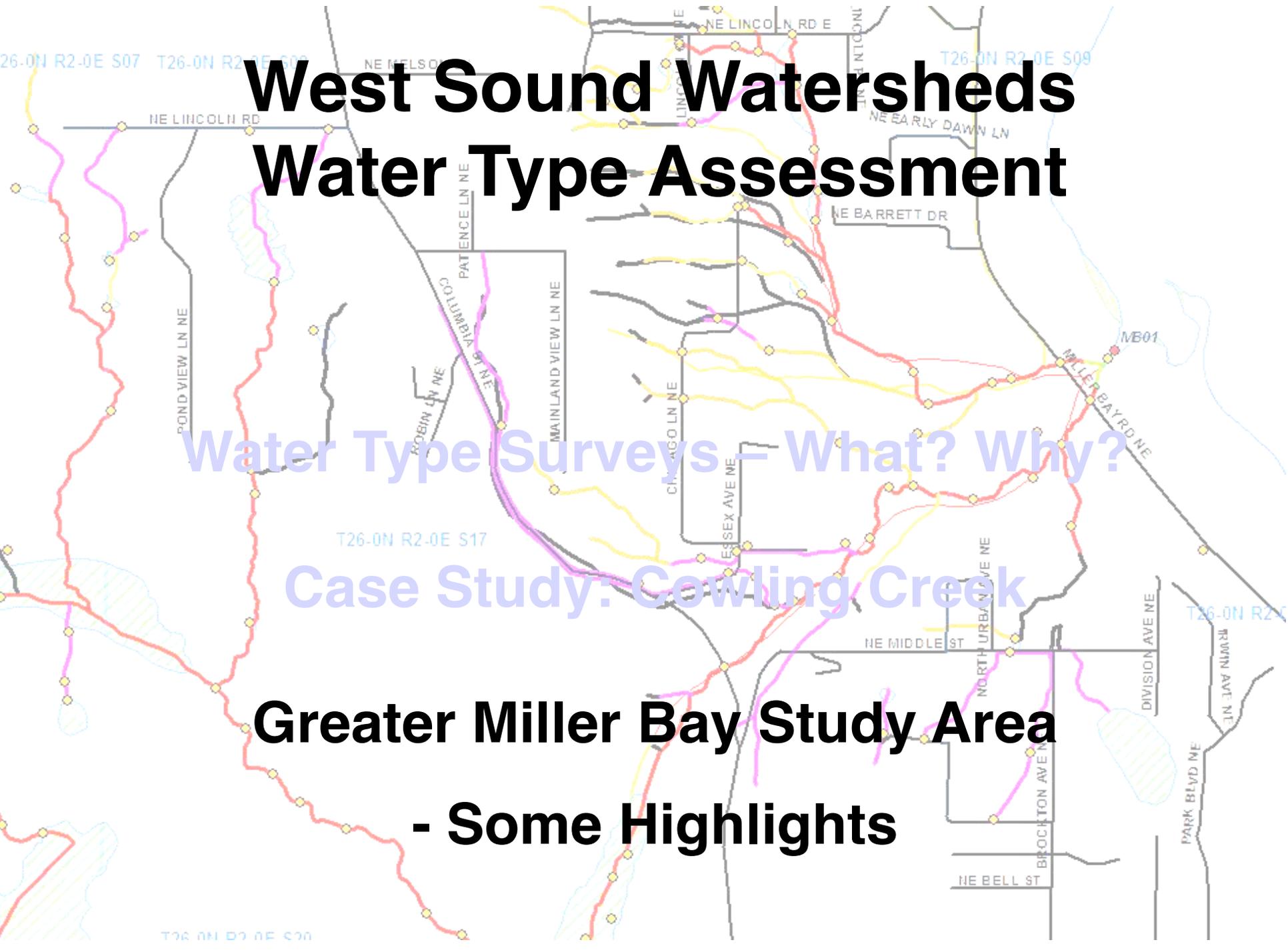
West Sound Watersheds Water Type Assessment

Water Type Surveys – What? Why?

Case Study: Cowling Creek

Greater Miller Bay Study Area

- Some Highlights

A map of the West Sound Watersheds area, showing various streets and water bodies. The map is overlaid with colored lines (red, yellow, pink, black) representing different water types or assessment results. The text is centered over the map.

West Sound Watersheds Water Type Assessment

Water Type Surveys – What? Why?

Case Study: Cowling Creek

Greater Miller Bay Study Area

- Some Highlights

Recovery of the Abundance and Diversity of PNW Salmon and Steelhead

- **Restore Important Habitats / Watershed Processes.**
- **Protect Existing Habitats and Processes from Further Degradation (Effective and Responsible Resource Management).**

Both actions are needed



Snoqualmie Watershed King County

March 9, 2007



WATERTYPING

A stream classification system used to regulate land-use around streams.



WHERE ARE THE FISH AND THEIR HABITATS?

WATERTYPING



WA Department of Natural Resources Water Types

WAC 222-16-031	Type	Buffer Size
Type S	Shorelines	Large
Type F	Fish Bearing	Medium
Type N (p,s)	Non Fish-Bearing	Small or none
Type U	Unclassified	TBD

WATERTYPING

Originally developed by WDNR to protect streams on state forest lands.

Subsequently adopted by most local governments in Washington to protect critical areas from adjacent land-use.



Kitsap County CAO

19.300.310 Fish and wildlife habitat conservation area categories.

...

1. Streams. All streams which meet the criteria for Type S, F, Np or Ns waters as set forth in WAC 222-16-030 of the Washington Department of Natural Resources (DNR) Water Typing System, as now or hereafter amended, Table 19.300.310 (*See also* Chapter 19.800, Appendix “B”).

Table 19.300.310 DNR Water Typing System

**TABLE 19.300.315
FISH AND WILDLIFE HABITAT CONSERVATION AREA DEVELOPMENT STANDARDS**

Streams			
Water Type	Buffer Width	Minimum Building Setback	Other Development Standards
S Segments of Big Beef Creek, Curley Creek, Chico Creek, Burley Creek, Union River, Blackjack Creek and Tahuya River	200 feet	15 feet beyond buffer	Where applicable, refer to the development standards in Chapters 19.200 (Wetlands) and 19.400 (Geologically Hazardous Areas). Where such features occur on site, the more restrictive buffer or building setback shall apply.
F	150 feet	15 feet beyond buffer	
Np	50 feet	15 feet beyond buffer	
Ns	50 feet	15 feet beyond buffer	
Saltwater Shorelines and Lakes			
Shoreline Designation¹	Buffer Width	Minimum Building Setback	Other Development Standards
Urban	50 feet	15 feet beyond buffer	Where applicable, refer to the development standards in Chapters 19.200 (Wetlands) and 19.400 (Geologically Hazardous Areas). Where such features occur on site, the more restrictive buffer or building setback shall apply.
Semi-Rural and Rural shorelines and	100 feet	15 feet	

Regulatory maps that guide stream protection ordinances are **INACCURATE**

- **The maps consistently underestimate the distribution of fish and fish habitats.**
- **Many streams are incorrectly mapped or are not on the maps at all.**

Misidentified fish habitats are not receiving the protection they warrant
under existing laws

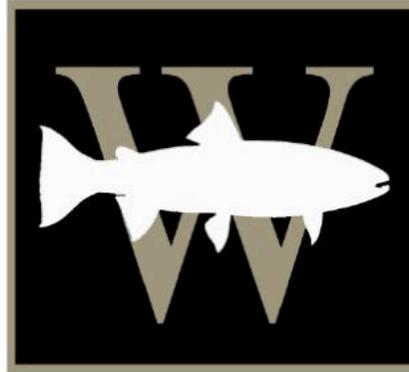
When development occurs **too close** to streams

Altered hydrographs - stormflows increase in magnitude and frequency, and summer baseflows reduce or disappear altogether.

Increased erosion - aggravated by loss of riparian vegetation and an altered hydrograph, channels downcut and mobilize large amounts of fine sediments.

Increased water temperatures – loss of riparian habitat increases summer water temps.

Reduced water quality - pavement accumulates and delivers pollutants through stormwater infrastructure. Septic drainfields built too close to streams cause ecological and human health concerns.



Wild Fish Conservancy

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**Working with federal, state, and local agencies
and tribes to accurately map and type streams
so they can be adequately protected.**

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P R E S E R V E P R O T E C T R E S T O R E



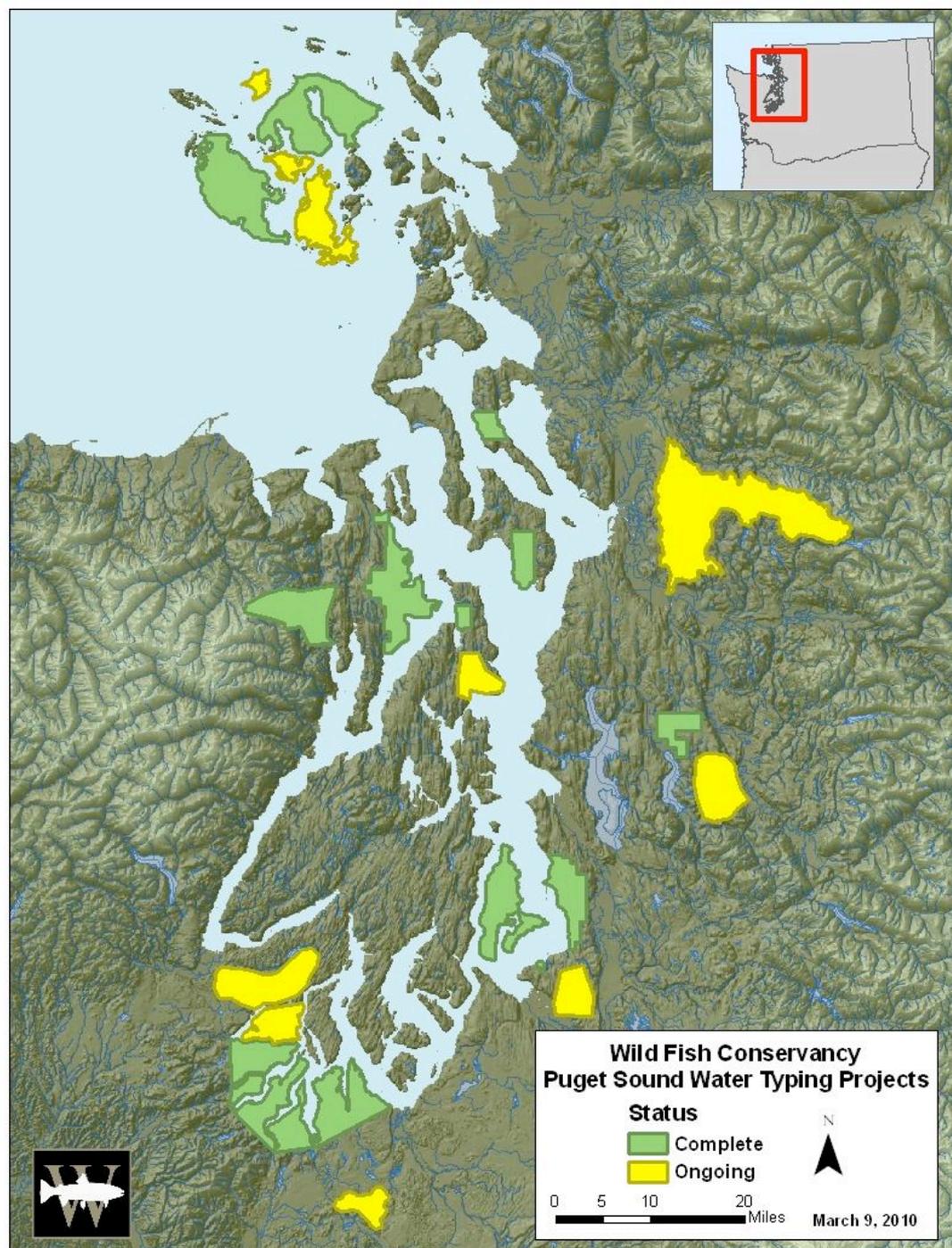
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Systematic Water Type Assessments

WRIAs

02, 07, 09, 13, 14,
15, 17, 22-23, 28.



Project Field Elements

Correct water type classification per WAC 222-16-031 and Section 13 of the FPBM.

With Landowner Permission...

- Characterize channel and riparian condition, water temperatures, and instream features that may affect fish distribution. Document with photos and GPS.
- When fish are brought to hand, collect species, length, and condition data. Document with photos and GPS.
- Using GPS, correctly map the course of incorrectly mapped and unmapped stream channels.



Project Products

GIS for:

Fish Species Composition and Distribution

Ground-truthed watertype

Habitat and instream feature characterization

Stream channel locations (GPS)

Interactive web-based interface

Deliver all data to WDFW, WDNR, affected counties, cities, and Tribes

Public Presentation of Results



Project Results

- Improved regulatory protection of stream habitats
- Strengthening of salmon recovery Strategies and Plans
- Identification and prioritization of restoration and protection opportunities





Wild Fish Conservancy

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[Watertyping Details](#)

Stream:CP25A-1

Crew:Glasgow/Staller

Date:5/3/2005

Stream ID:CP25A-1

Point ID:135



Enter an Address

[Find Location](#)

[View Legend](#)

Interactive Map by
[Umbrella Consulting](#)

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Puget Sound Water Type Assessment: 2005-2007



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SCIENCE



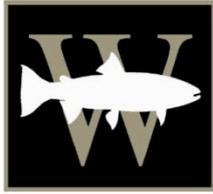
EDUCATION



ADVOCACY

JOIN NOW

VOLUNTEER

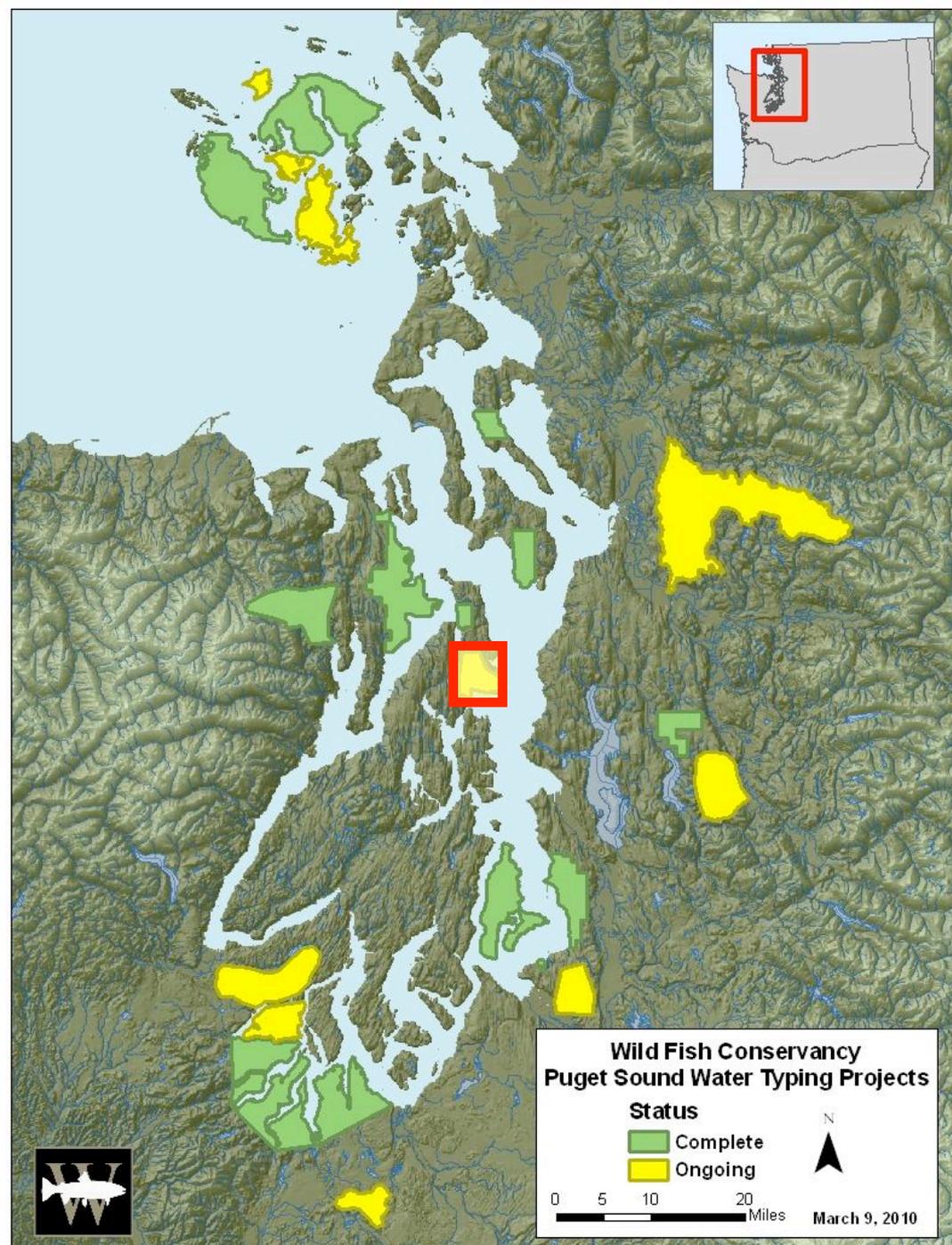


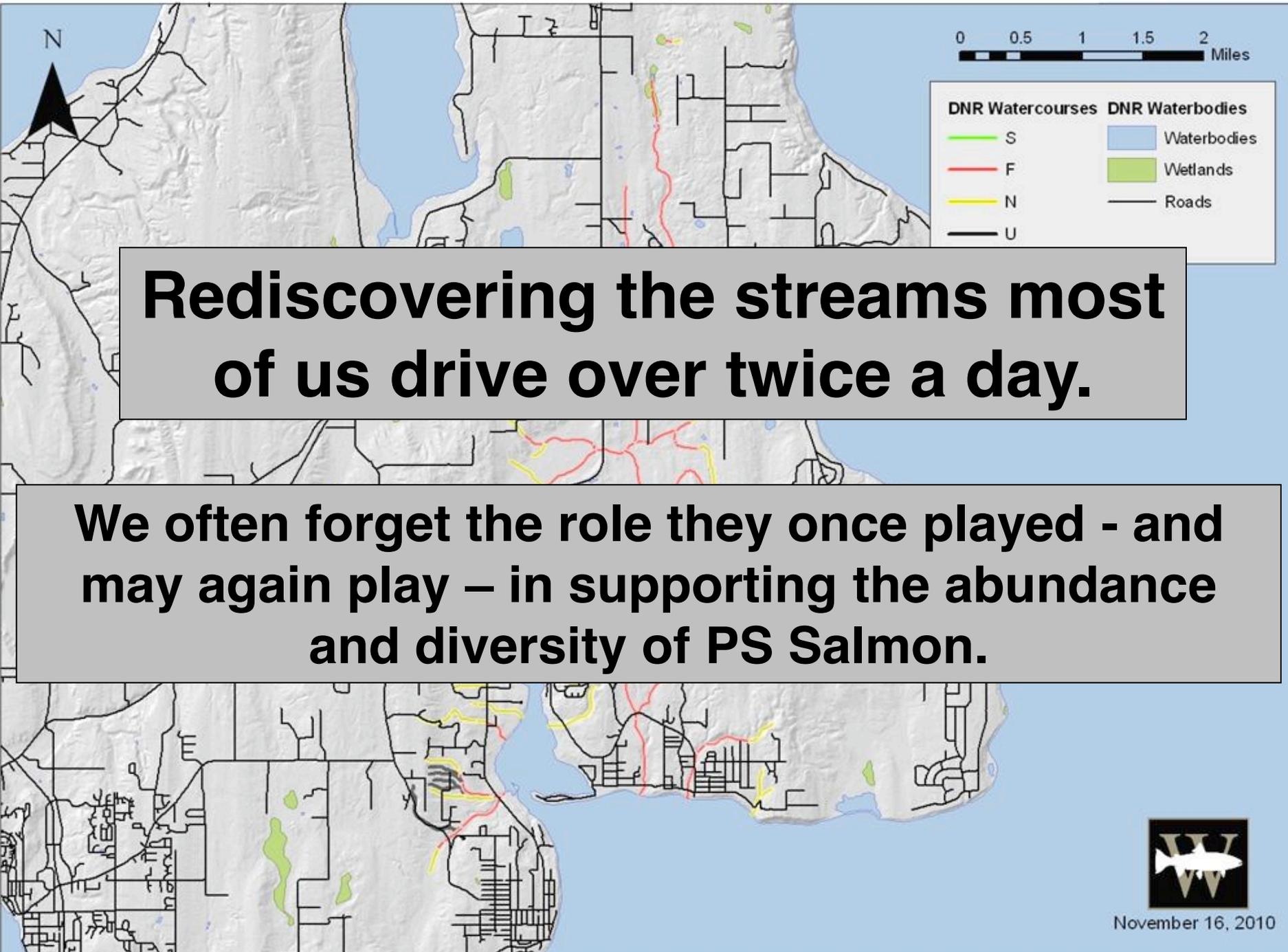
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West Sound Systematic Water Type Assessment

Or...

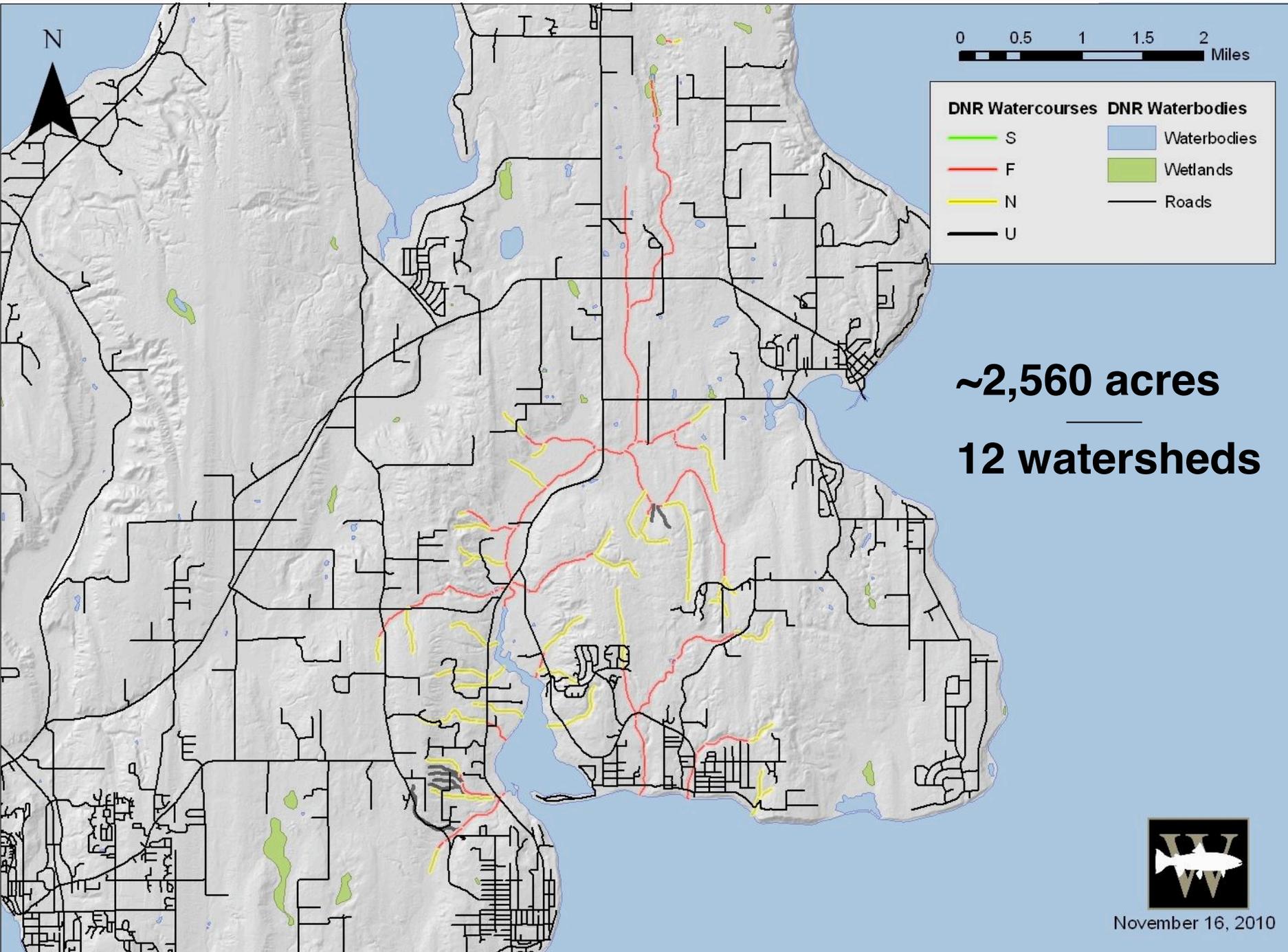




Rediscovering the streams most of us drive over twice a day.

We often forget the role they once played - and may again play – in supporting the abundance and diversity of PS Salmon.





0 0.5 1 1.5 2 Miles

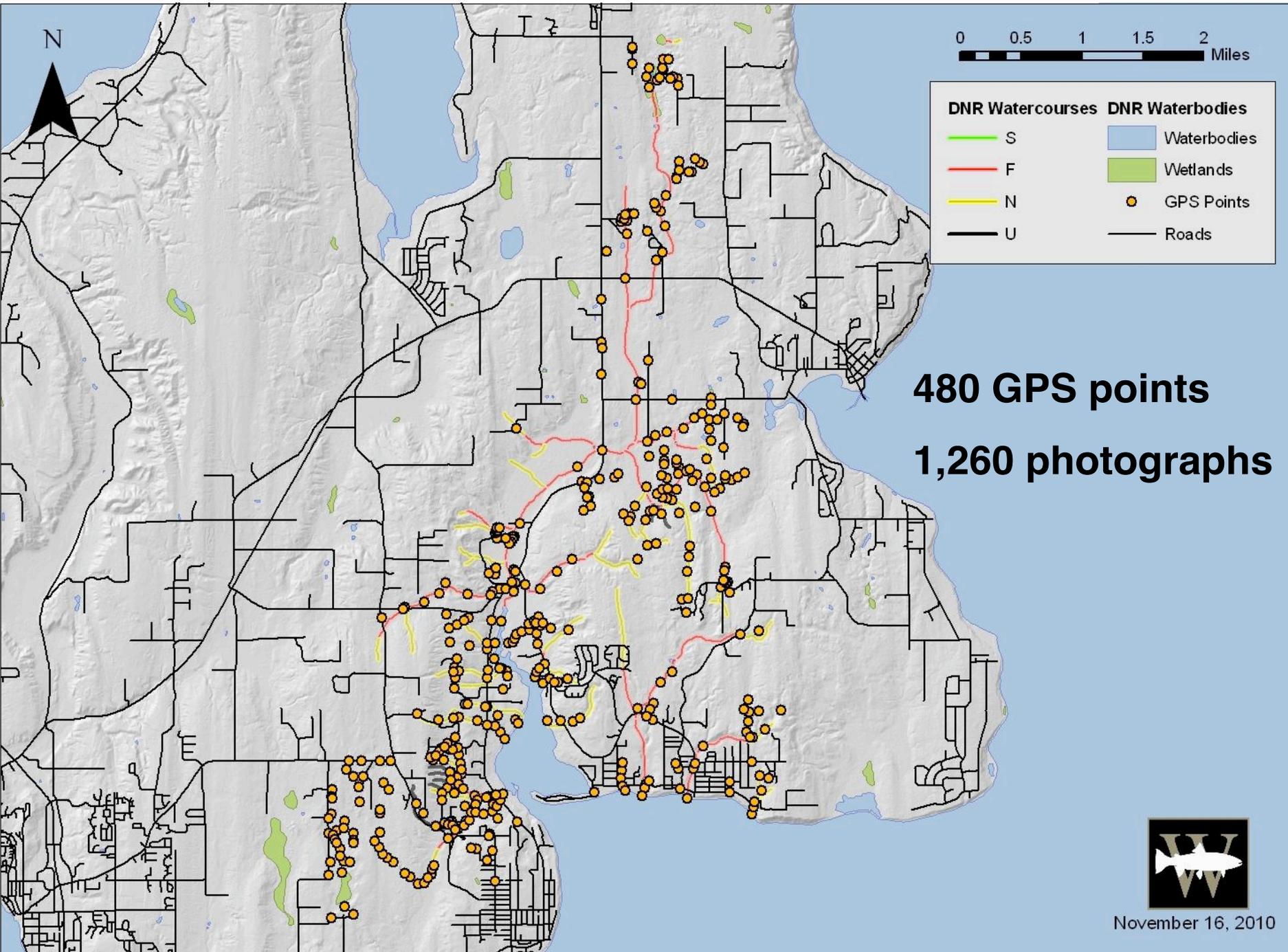
DNR Watercourses **DNR Waterbodies**

- S
- F
- N
- U
- Waterbodies
- Wetlands
- Roads

~2,560 acres
12 watersheds



November 16, 2010



0 0.5 1 1.5 2 Miles

- | DNR Watercourses | | DNR Waterbodies | |
|---|--|---|--|
|  S | |  Waterbodies | |
|  F | |  Wetlands | |
|  N | |  GPS Points | |
|  U | |  Roads | |

480 GPS points
1,260 photographs

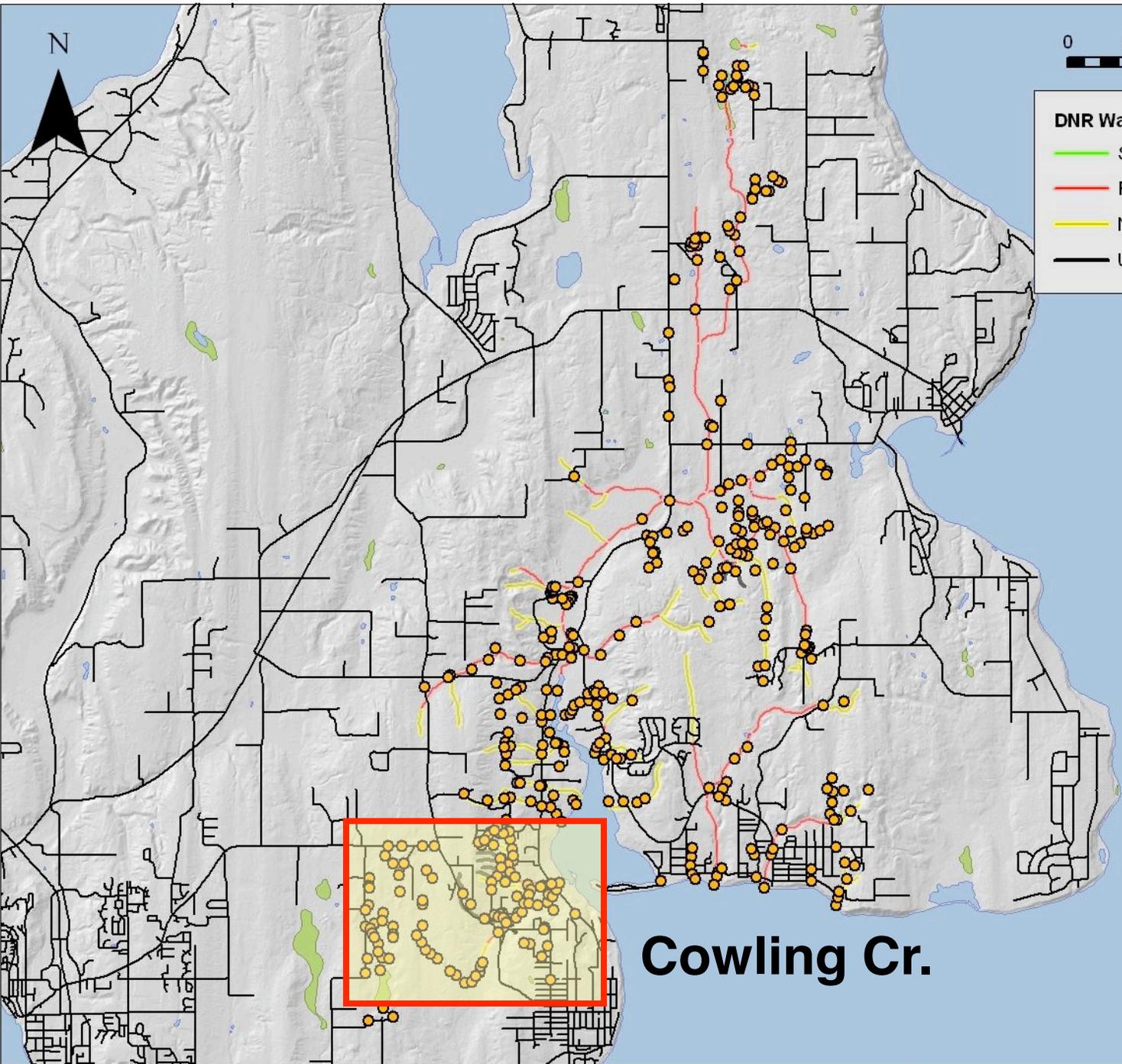


November 16, 2010

N



DNR Watercourses		DNR Waterbodies	
S	Waterbodies		
F	Wetlands		
N	GPS Points		
U	Roads		



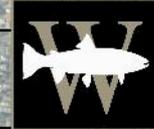
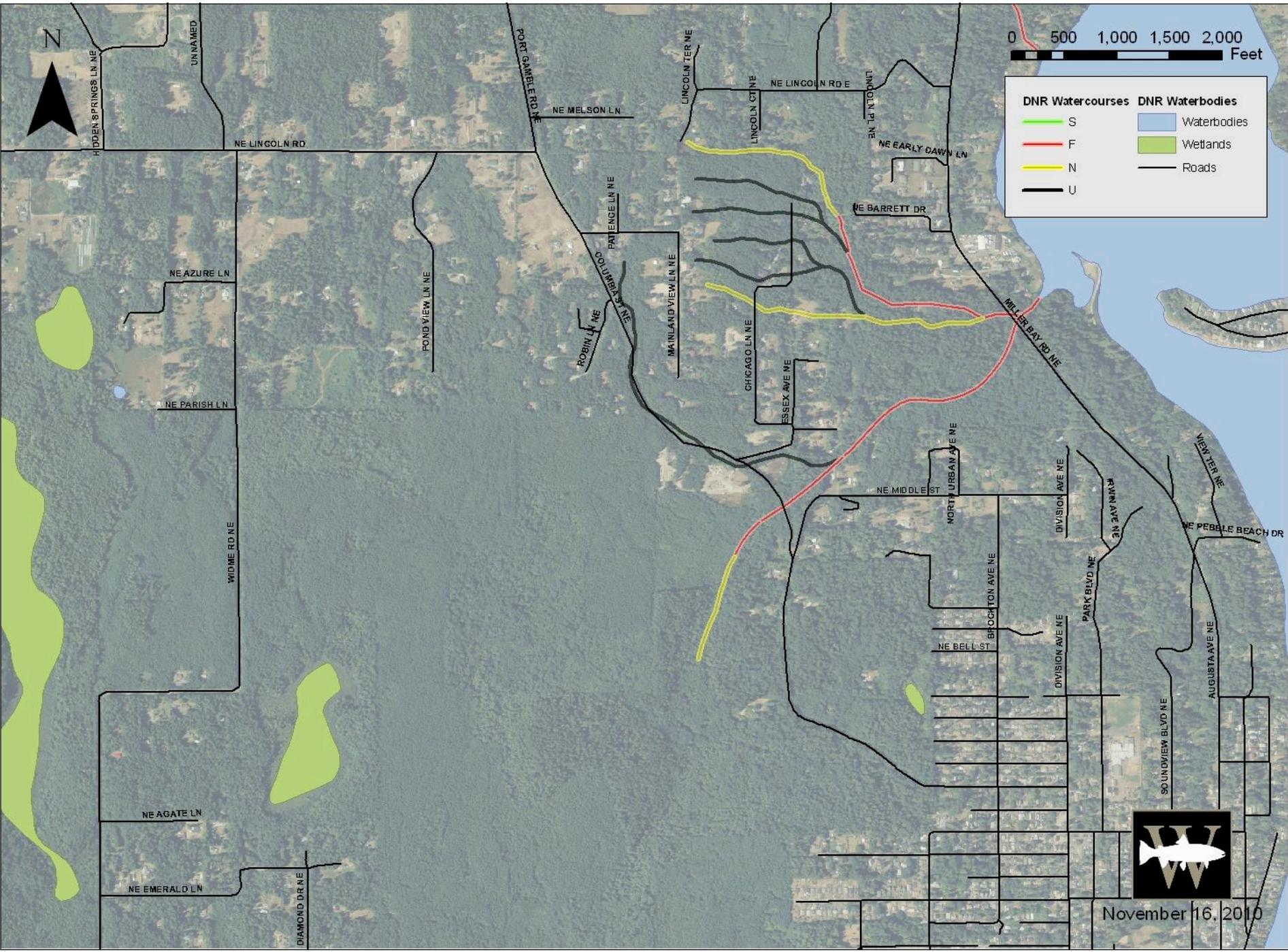
Cowling Cr.



November 16, 2010



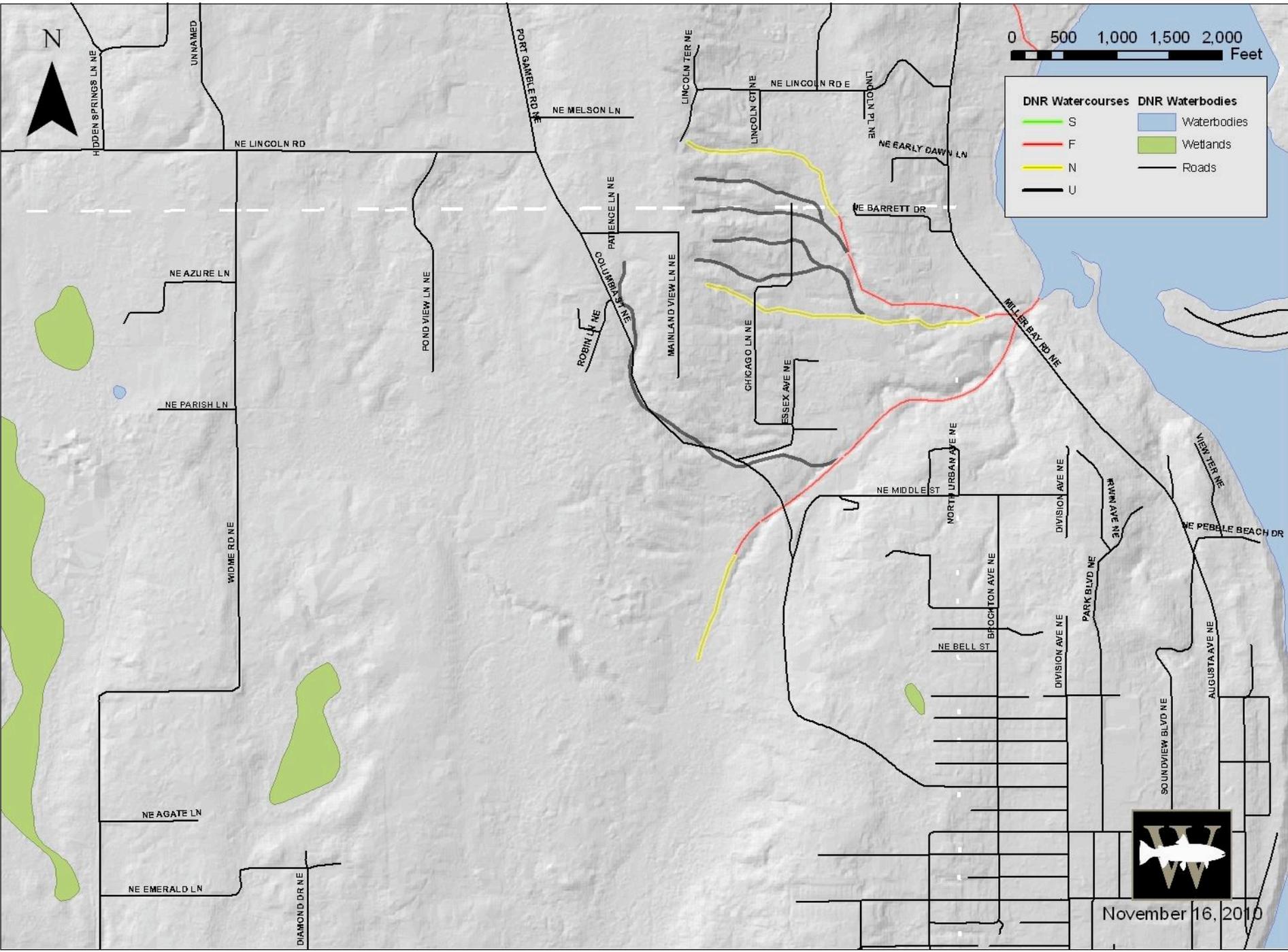
DNR Watercourses		DNR Waterbodies	
	S		Waterbodies
	F		Wetlands
	N		Roads
	U		



November 16, 2010



DNR Watercourses		DNR Waterbodies	
	S		Waterbodies
	F		Wetlands
	N		Roads
	U		

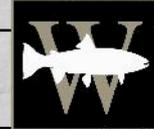
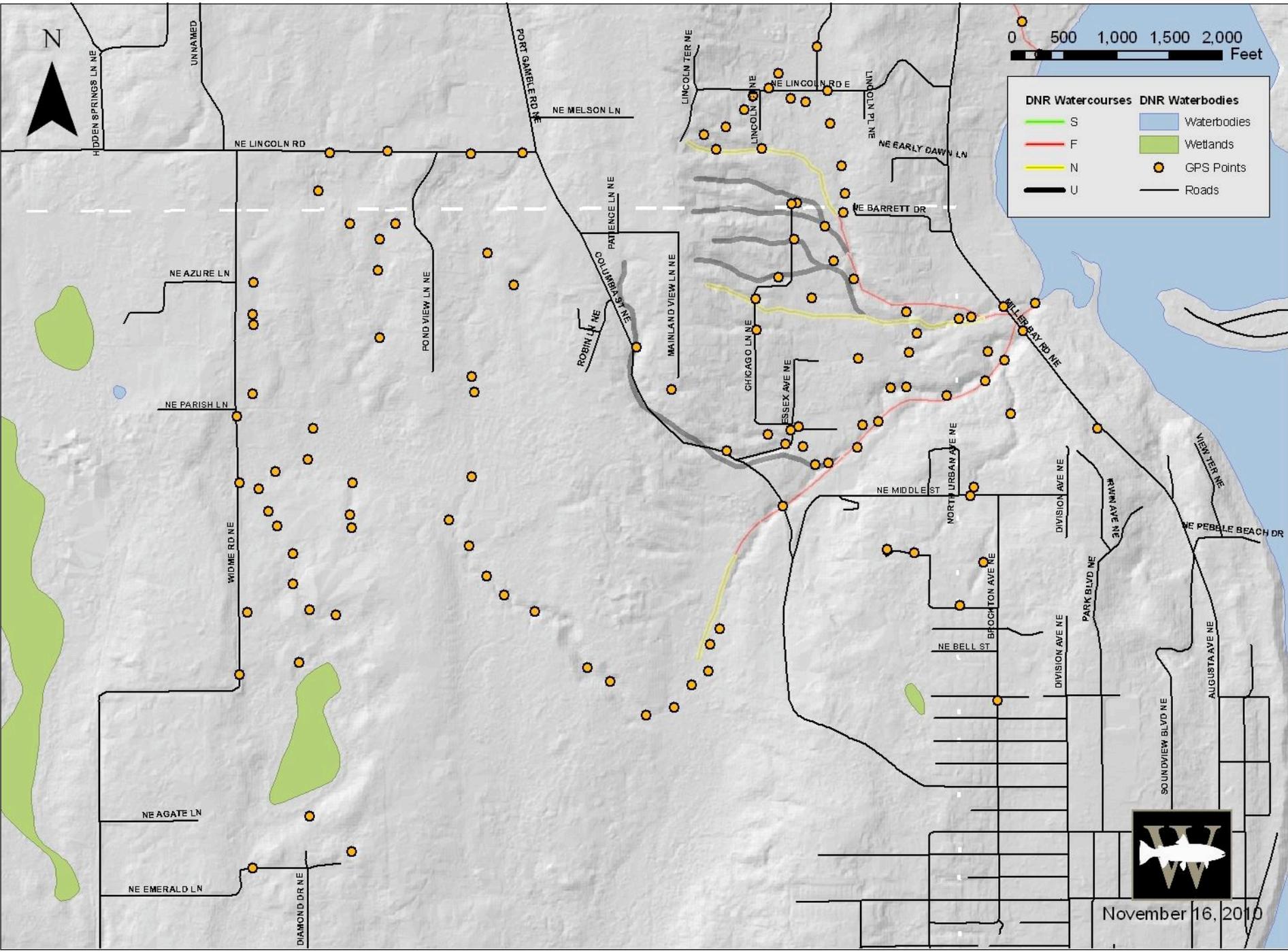


November 16, 2010

N



DNR Watercourses		DNR Waterbodies	
	S		Waterbodies
	F		Wetlands
	N		GPS Points
	U		Roads

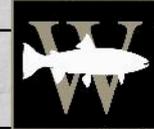
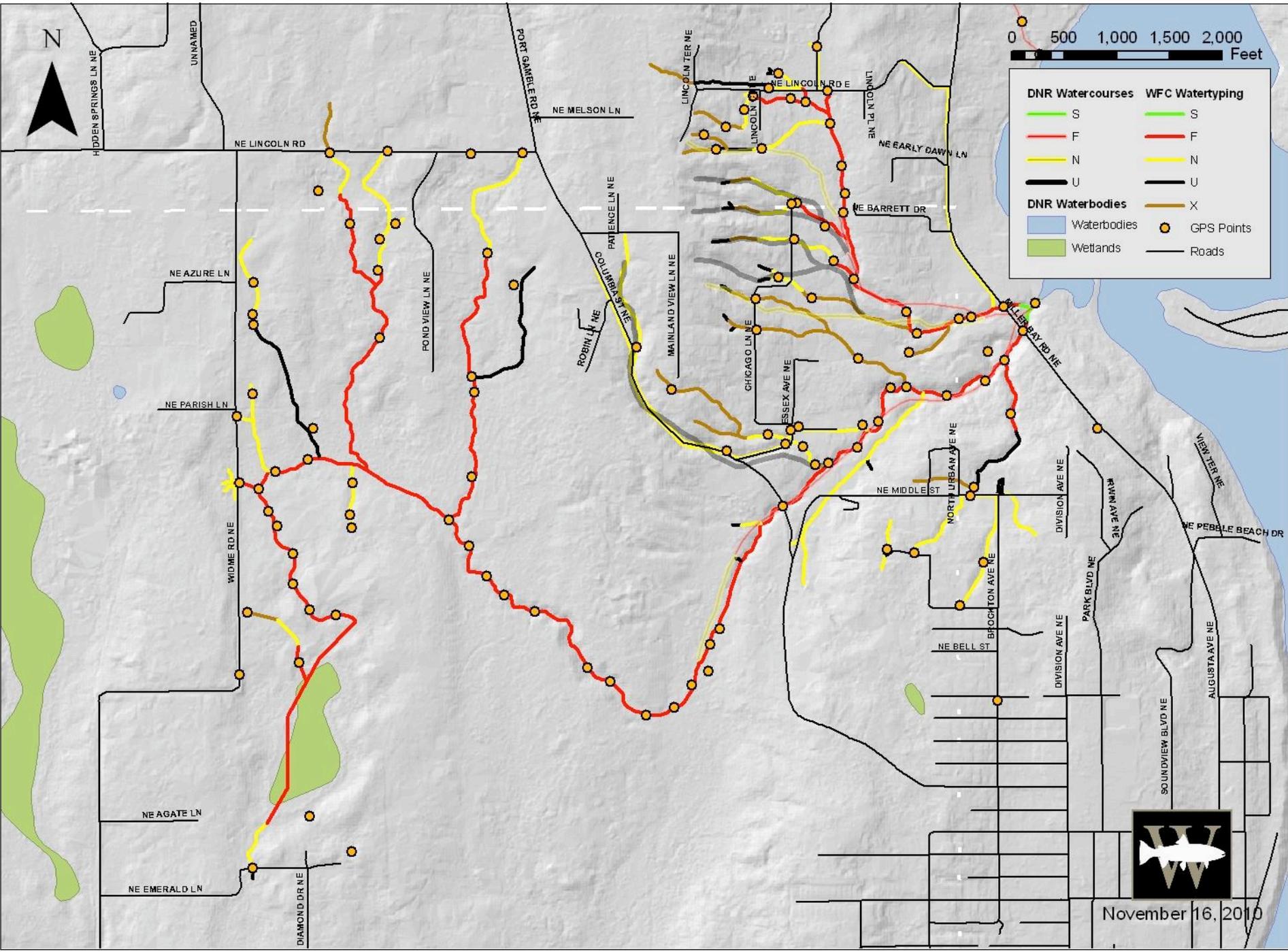


November 16, 2010

N



DNR Watercourses		WFC Watertyping	
	S		S
	F		F
	N		N
	U		U
DNR Waterbodies			X
	Waterbodies		GPS Points
	Wetlands		Roads



November 16, 2010

Cowling Creek, Kitsap County

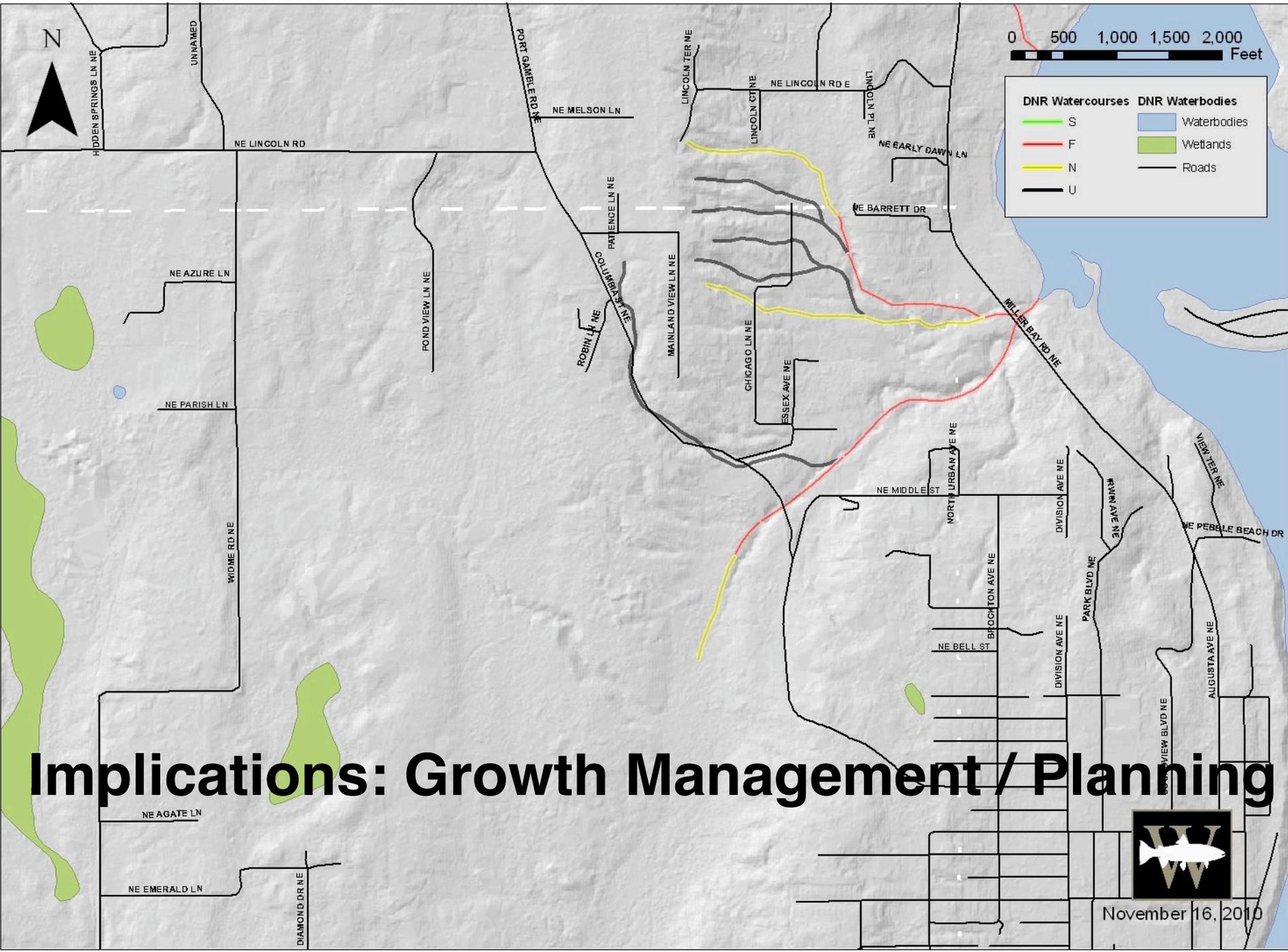
miles

Type	DNR	WFC	
S	0	0.12	
F	1.42	5.46	
N	1.06	5.4	
U	1.84	1.24	Δ
Total	4.32	12.22	7.9

**The regulatory maps missed
66% of this watershed.**

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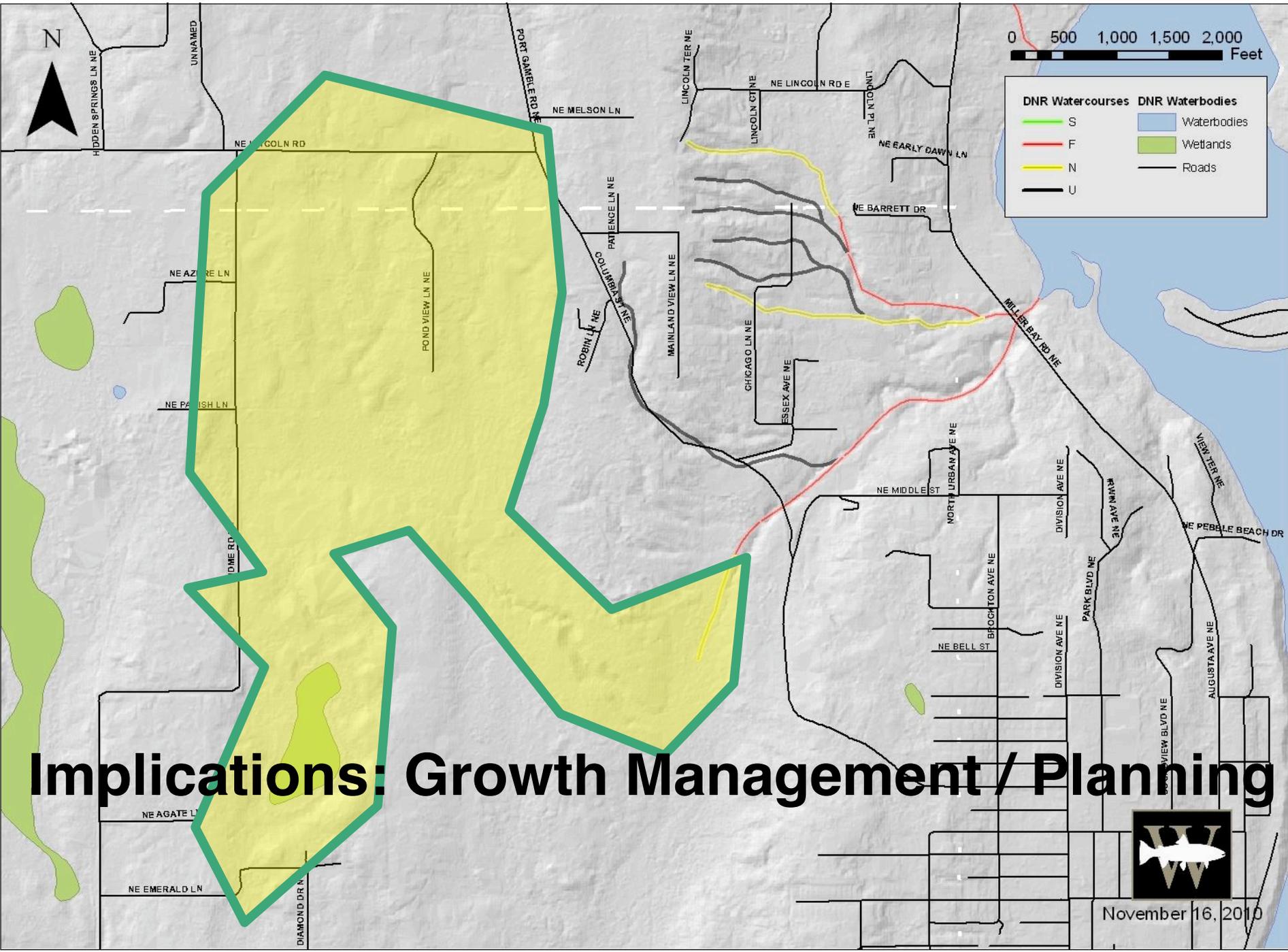




Implications: Growth Management / Planning



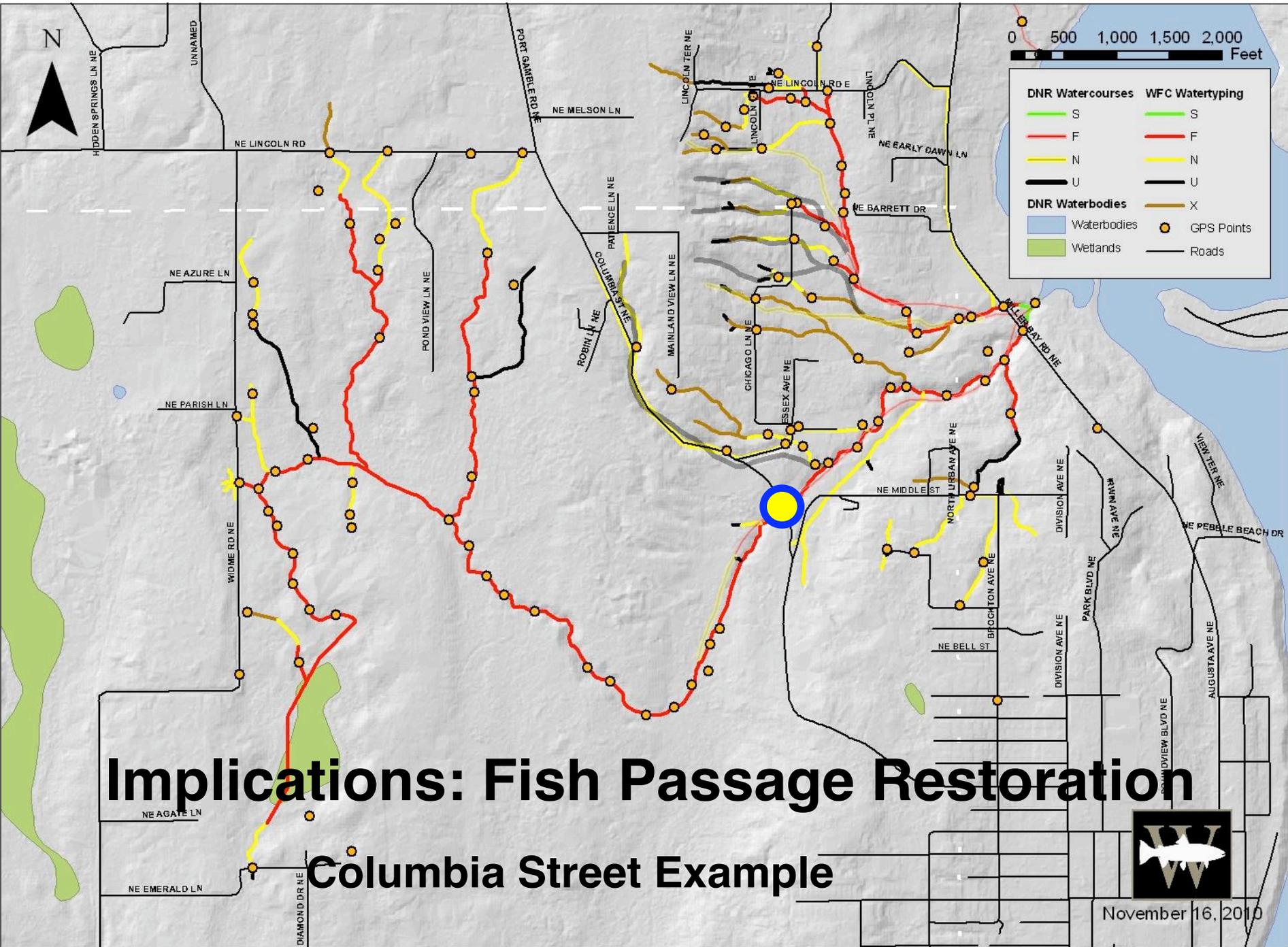
November 16, 2010



Implications: Growth Management / Planning



November 16, 2010



Implications: Fish Passage Restoration

Columbia Street Example



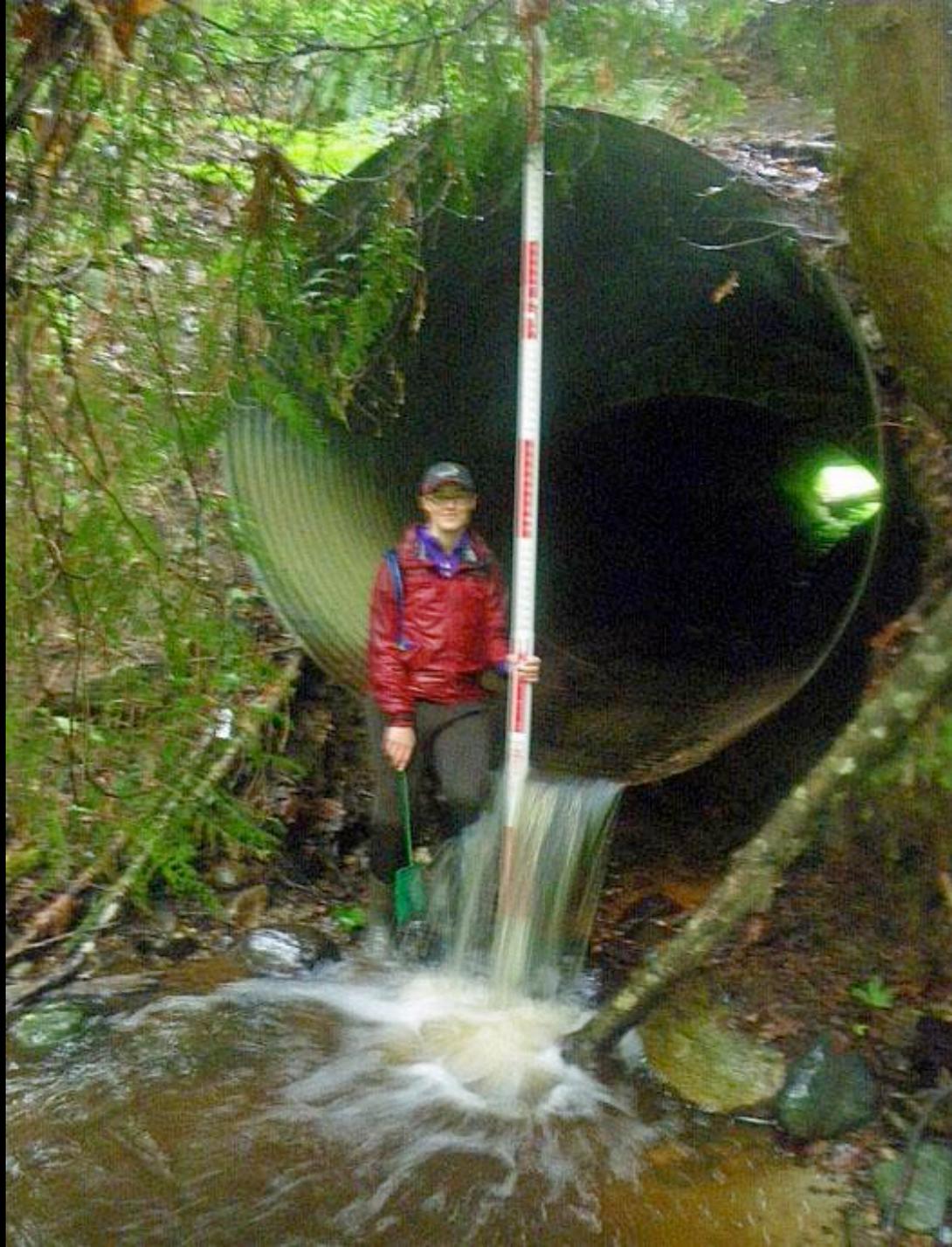
November 16, 2010

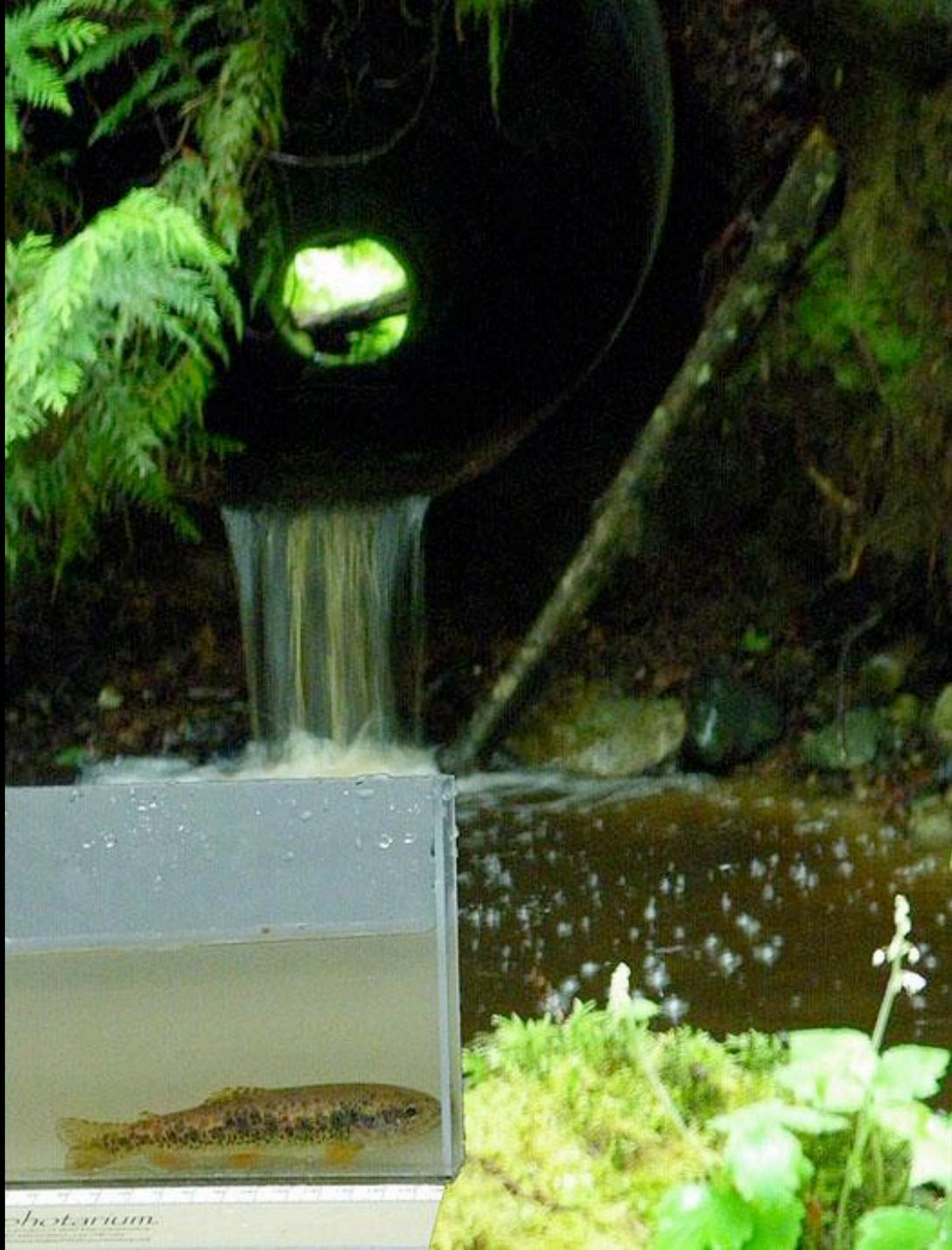


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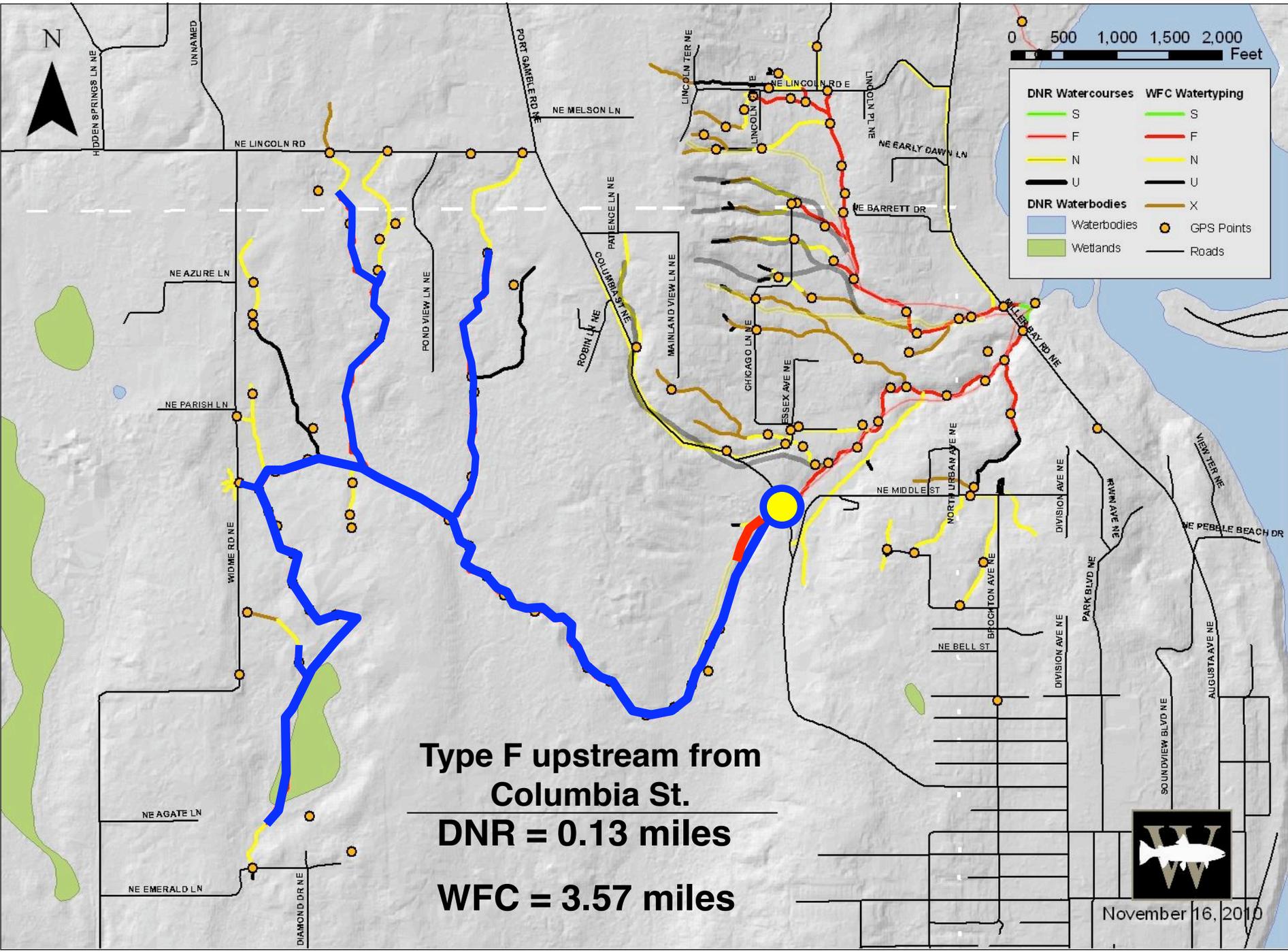
PATH OF THE SALMON







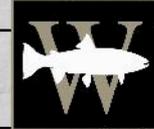
photarium[®]
a product of Wild Fish Conservancy
for information: 425-758-1167
photarium@wildfishconservancy.org



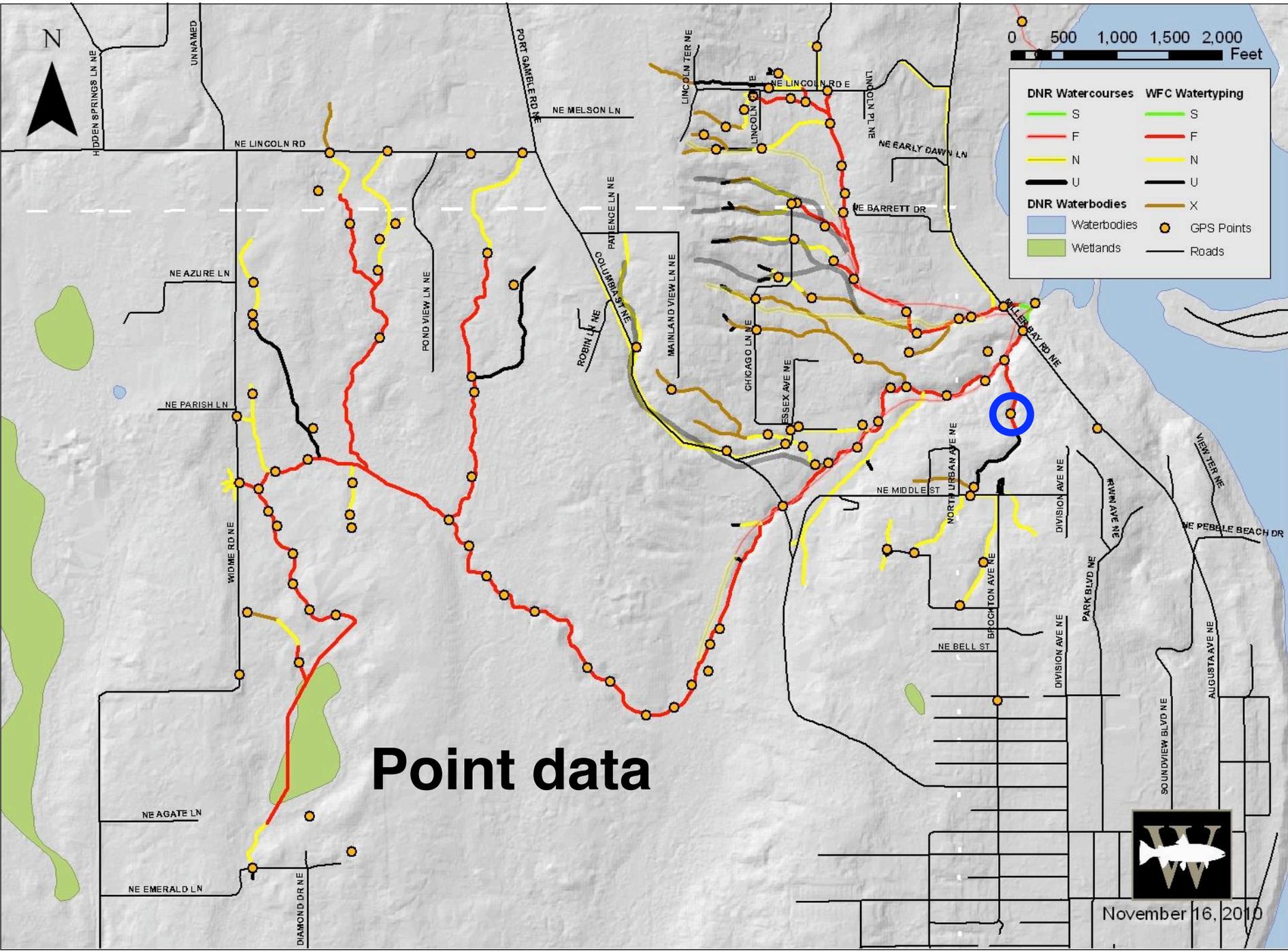
**Type F upstream from
Columbia St.**

DNR = 0.13 miles

WFC = 3.57 miles



November 16, 2010



Point data



November 16, 2010

Skip to a PointID

crew survey_date reachID GPSUnitID pointID temp(C) time

point_type

Perch Height (FT) Material Throughout? span (FT) material barrier_status (WFC field call)

(Up)Stream Reach Length (FT) (Up)Stream number measurements (Up)Stream Reach BFW (FT) (Up)Stream Reach W/W (FT) (Up)Stream Reach Grade

Downstream number of measurements Downstream Reach Length (FT) Downstream Reach BFW (FT) Downstream Reach W/W (FT) Downstream Reach Grade (%)

notes
Culvert: note - this culvert was removed and replaced by a footbridge in 2010. Perched and undersized culvert was previously a total barrier to upstream fish passage, and caused considerable channel scour and incision downstream.

photos

photoID	cameraID	photo_type	notes
IMGP0691	BT01	channel	View downstream from former barrier culvert crossing of old logging spur road now conve
IMGP0689	BT01	channel	View downstream from barrier culvert outlet. Note 5 ft. depth of channel scour and incisi
IMGP0690	BT01	culvert	Perched outlet of barrier culvert crossing of old logging road-cum-trail. Note trickle of flow
IMGP0692	BT01	culvert	Crushed and debris-filled inlet of barrier culvert crossing of old logging road-cum-trail.
IMGP0694	BT01	culvert	Inlet of former barrier culvert (bottom of photo) showing depth of old road fill removed duri
IMGP0696	BT01	channel	View upstream several meters from former barrier culvert crossing of old logging spur roa
*			

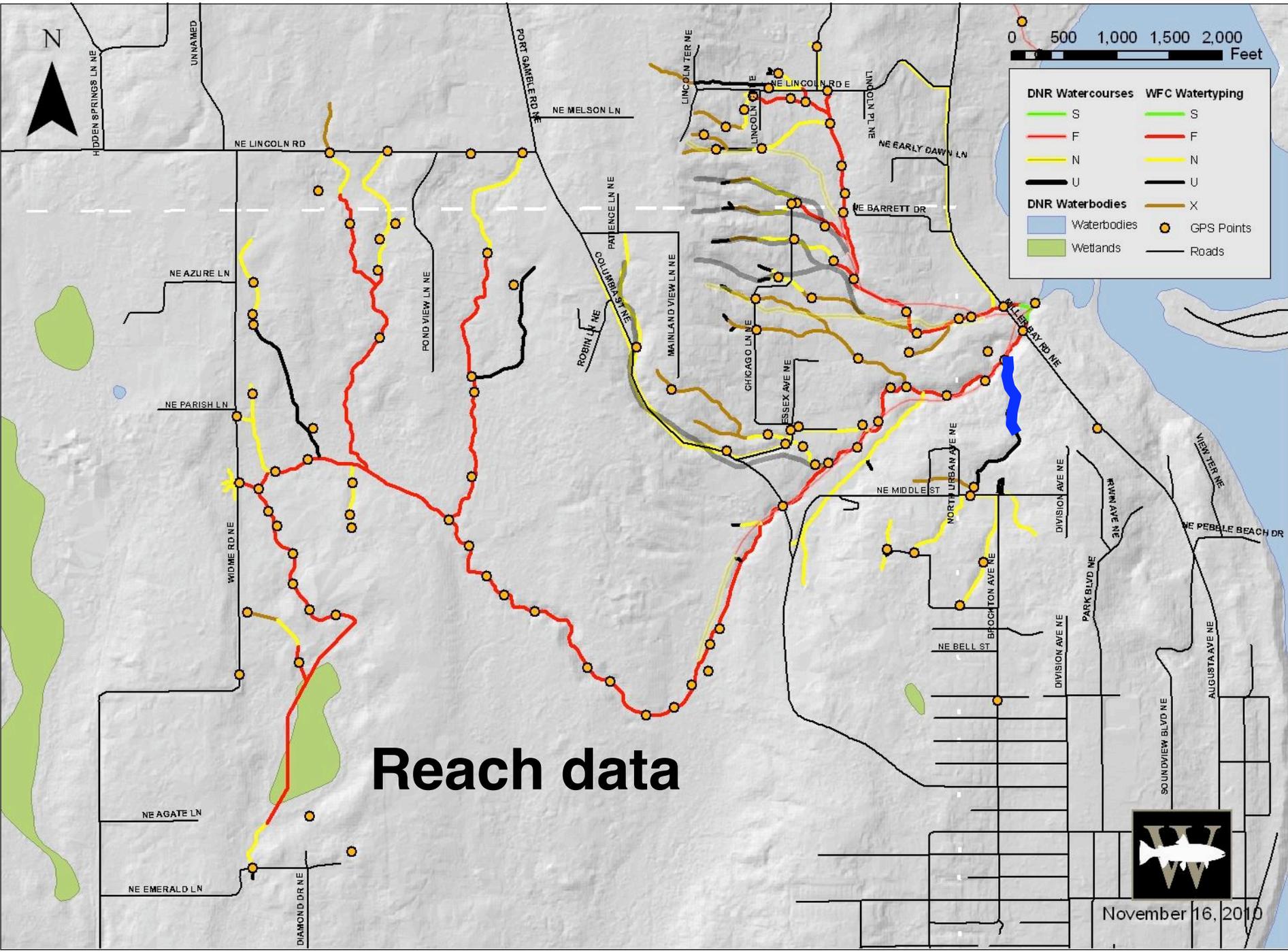
Record: of 6

Supplemental Habitat Information

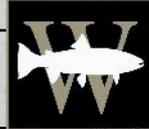
% pools % conifer % bedrock % gravel
 % shade % deciduous % boulder % sand
 LWD % grass/shrub % cobble % mud

Species Observed

species1 species4
 species2 species5
 species3 species6



Reach data



November 16, 2010

Skip to a ReachID

ReachID MB01B SubBasinID MB01 Sub Basin Name South Cowling Creek Tributary To Cowling Creek Survey Date 5/25/2010 Crew BT, DD

Location of DS end of reach

Township T26N Range R02E Section S16 Quarter NW County Kitsap

DNR watype1 NC DNR type 2 DNR type3

WFC 1975 Watertype 3 WFC Watertype F

Reason for Type Break PropertyBoundary

Reason for Type Change

Fish found Physical public water diversion Hatchery diversion WAC Definition

Physicals (enter both average AND min/max)

Avg BFW ft 5 Min BFW ft 3.5 Max BFW ft 6.5 AVGGrad 3-5% MinGrad 1-3% MaxGrad 12-16% Note: Min, max and average from PIDs (use "points" button to the right to see relevant PIDs)

Downstream Barriers

Natural Falls Cascade Chute Height ft 0.5 Temporary Manmade Other Unknown

Barrier Notes

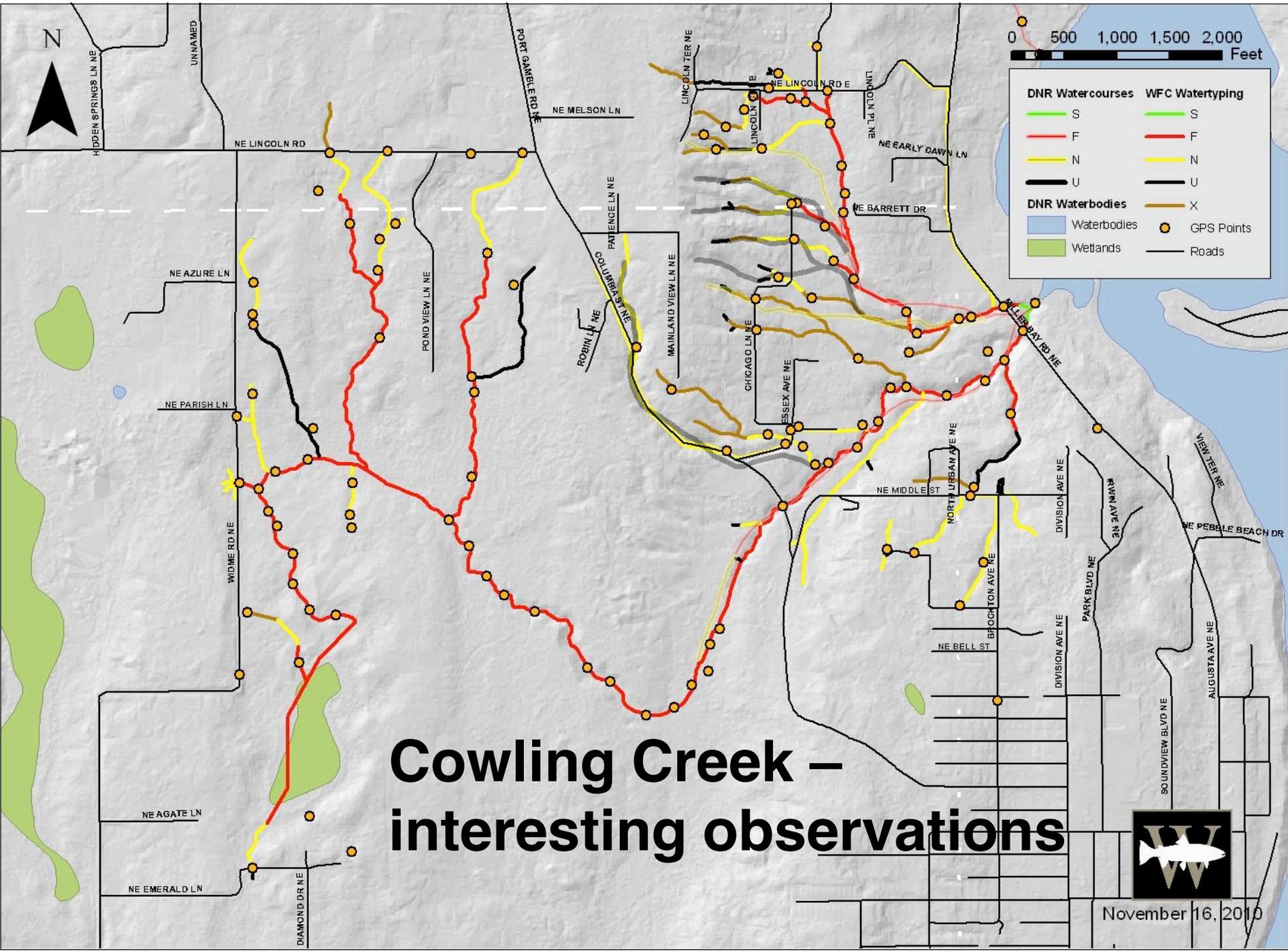
Miller Bay Road culvert(s) on MB01 Cowling Creek is a partial barrier to upstream fish passage into MB01B South Cowling Creek.

Notes Water Level Normal

MB01B South Cowling is a seasonal stream. Classification was based on physicals because there was no surface flow at the time of the survey.

Notes Mass Wasting Mass Wasting points

Notes Stream MB01B "South Cowling Creek" is the second significant upstream tributary of Cowling Creek (MB01), entering from the right bank ~250 ft. above the inlet to the mainstem double culvert crossing of Miller Bay Road, and just below the breached outlet of a concrete impoundment structure associated with former mainstem hatchery operations. The MB01B channel does not currently appear on WDNR water type maps. It is ~8 ft. wide at the confluence, but quickly narrows to an average bankfull width of 5 ft., extending upstream along an incised channel in a brushy ravine, with regenerating (post-harvest) deciduous and conifer forest upslope on valley walls. A former logging road that extends along the left bank of the stream has been converted into a gravel-surfaced footpath as part of the Cowling Creek Center nature trail system, currently managed by the Suquamish Tribe and Great Peninsula Conservancy as a forest preserve. The incised channel has a heavy growth of brush, and small wood debris litters the channel bed throughout, potentially creating temporary blockages until fall freshets can move this material to the channel margins or out of the system. The channel has an average gradient of ~4%, with a short, steeper segment approaching 12% that is located ~350 ft. upstream from the mouth. A former barrier culvert at the crossing of a logging spur/foot trail ~560 ft. above the mouth was removed and replaced with a footbridge in 2010, restoring fish passage into upstream reaches. This perched and undersized culvert was previously a total barrier to upstream fish migration, and likely caused much of the channel erosion and incision noted downstream. Gravel and small cobble predominate along the channel below the old culvert, while the upper channel consists of gravel, silt, and sand in roughly equal proportions. The gradient is reduced again to ~3-5% continuing above the newly-constructed footbridge along a considerable less-incised, more natural-appearing channel for ~180 ft. through denser riparian forest consisting primarily of alders and young conifers to the north boundary of property parcel #G161620715200. We upgraded the previously unclassified MB01B channel to "F" (Type 3) habitat from the Cowling Creek confluence upstream to the property line, but due to lack of access, Wild Fish Conservancy surveyors were unable to determine the upstream extent of fish-bearing habitat which likely extends several hundred feet further to the vicinity of a small (less than 1/2 acre) wetland located adjacent to private driveways near NE Middle Street. Several seasonal non fish-bearing (Ns or Type 5) ditched and diverted channels (MB01B-A, MB01B-B, MB01B-C, and MB01BD) feed this wetland from upslope ravines located to the south of NE Middle Street. These much-altered channels are the headwater tributaries for South Cowling Creek, and contribute considerable surface flow during heavy precipitation events. There was very little surface flow in the MB01B channel downstream from the barrier culvert to the mouth, and the channel above that



Cowling Creek – interesting observations



November 16, 2010



Juvenile Coho, Cowling DS Miller Bay Rd.

Barrier culvert removal, Mainstem Cowling



Juvenile Cutthroat Trout, Cowling DS Miller Bay Rd.



Habitat Measurements, DS end of N. Cowling



Native Sculpins, Cowling Estuary



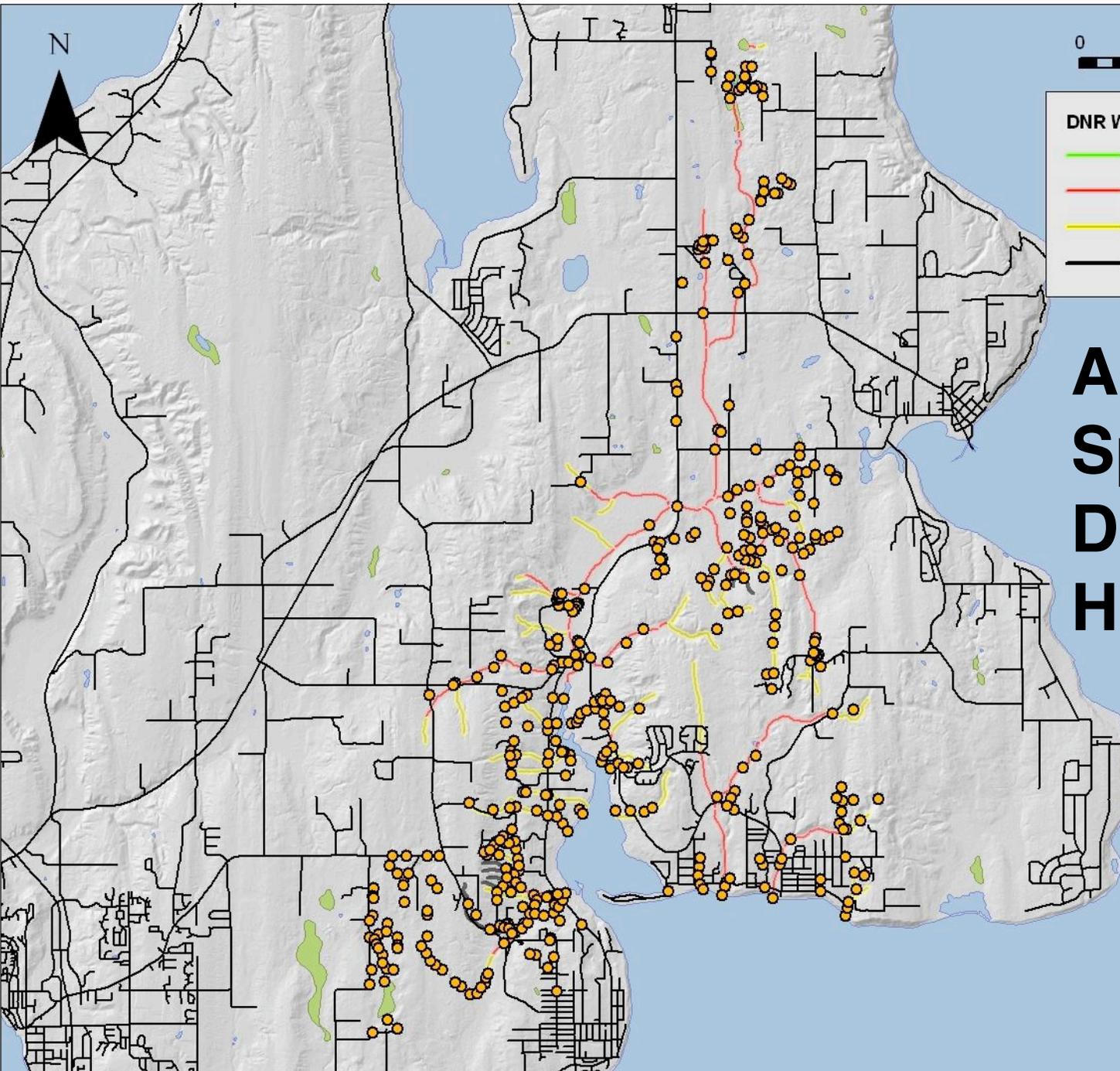
**N. Cowling
barrier culvert
under MB Rd.**

**One of ten man-
made barriers to
fish passage in
N. Cowling Cr.**



Spawning Habitat, M.S. Cowling





0 0.5 1 1.5 2 Miles

DNR Watercourses		DNR Waterbodies	
S	F	Waterbodies	Wetlands
N	U	GPS Points	Roads

Aquatic Species Diversity Highlights



November 16, 2010









Plethodon salamander



photarium.

a product of Wild Fish Conservancy
for information: 425-788-1167

photarium@wildfishconservancy.org



photarium.
a product of Wild Fish Conservancy
for information: 425-788-1167

Still, relatively intact watersheds w/ opportunities to improve conditions for wild fish: remove man-made barriers, protect and improve riparian / WQ conditions, hydrology, etc.

+

Interested, informed, and motivated community.

+

Technical Resources - partners to assist with project development, grantwriting, implementation, monitoring.

=

Recover Natural Watershed Processes

Acknowledgements

A photograph of a man with a white beard, wearing a blue jacket and dark waders, standing in a marshy area near a body of water. He is holding a net. The background shows a calm lake or river with a forested shoreline and a small building in the distance.

Funding from the SRFB,
through the West Sound
Watersheds Council

Landowners

Technical and field
assistance from the
Suquamish Tribe and
FOMB, specifically Paul
Dorn, Dick D'Archangel,
Molly Jackson, and Tom
Curley.

For More Information:



Jamie Glasgow, Director of Science and Research

360/866-4669, jamie@wildfishconservancy.org

www.wildfishconservancy.org

“...a listed species could be gradually destroyed, so long as each step on the path to destruction is sufficiently modest”



Judge Sydney R. Thomas, 9th U.S. Circuit Court of Appeals

April 2007

From: KNUTZEN, KRIS (DNR) [mailto:kris.knutzen@dnr.wa.gov]
Sent: Thursday, July 09, 2009 2:08 PM
To: Corina Hayes
Cc: jamie@wildfishconservancy.org
Subject: RE: Stream typing
Corina,
The most recent and accurate data available is on the Wild Fish Conservancy site at <http://www.wildfishconservancy.org/maps>
Kris Knutzen
WA DNR

From: Corina Hayes [mailto:Hayesc@co.thurston.wa.us]
Sent: Wednesday, July 08, 2009 3:49 PM
To: KNUTZEN, KRIS (DNR)
Subject: Stream typing
The property is located off of Grayhawk Ln to the West of Tolmie State Park the parcel # are 11922410000 and 11922140000. there are a couple of streams mapped in this area on the Puget Sound Water Type Assessment - Also previously mapped as and N onsite and F leading into Tolmie State Park.
Corina Hayes
Assistant Planner
Thurston County Development Services
Planning & Environmental Section

Project Type <small>ss indicates south sound</small>	Project Name	Project Description (brief description)	Limiting Factors	Habitat Type	Activity Type	Project Performance (restore 30 acres of floodplain)	Primary Species Benefiting	Secondary Species Benefiting	Current Project Status (2011 Activity to be funded	2011 Estimated Cost	2012 Activity to be funded	2012 Estimated Cost	2013 Activity to be funded	2013 Estimated	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)
Capital																				
Habitat Restoration																				
ss	Penrose Point Bulkhead Removal	restore nearshore processes	altered nearshore habitat	Nearshore	restore nearshore and beach processes	1500 feet shoreline	Chinook	chum, coho, steelhead, cutthroat, forage fish	design nearing completion	finish design	\$90,000	construction	\$386,000	close out	\$0	2012	SPSSEG	\$476,000	\$57,900	WA State Parks, SRFB, PSAR,USFWS
ss	Whiteman Cove Estuary Restoration	restore tidal function	nearshore alteration	nearshore	restore nearshore, sub-estuary function	30 acres sub-estuary habitat	Chinook	steelhead, coho, cutthroat, chum, forage fish	conceptual	meet with landowners		propose project		design	\$50,000	2013	SPSSEG	\$500,000	\$50,000	SRFB, PSAR, ESRP
ss	Maple Hollow Shoreline Restoration	restore nearshore processes	altered nearshore habitat	Nearshore	restore nearshore function	2 acres,1450 ft. shoreline	Chinook	chum, coho, steelhead, cutthroat, forage fish	permitting completed	construction	\$50,000					2012	Key Pen Parks	\$600,000	local match	PSAR,ALEA
ss	Filucy Bay bulkhead removals	restore nearshore processes	altered nearshore habitat	Nearshore	restore nearshore, sub-estuary function	5000 ft shoreline	Chinook	chum, coho, steelhead, cutthroat	Conceptual	Design	\$30,000	Construction	380,000			2013	South Puget Sound SEG	\$380,000	ESRP	SRFB, PSAR
ss	Von Geldern Cove bulkhead removals	restore nearshore processes	altered nearshore habitat	Nearshore	restore nearshore, sub-estuary function	1500 ft of shoreline	Chinook	chum, coho, steelhead, cutthroat	Conceptual	Design	\$30,000	Construction	400,000			2014	South Puget Sound SEG	\$430,000	ESRP	SRFB, PSAR
ss	East Oro Bay dam removal	restore nearshore processes	altered nearshore habitat	nearshore	restore nearshore, salt marsh function		Chinook	chum, coho, steelhead, cutthroat	conceptual	scoping	\$5,000	design	40,000	construction	\$150,000	2014	South Puget Sound SEG	\$195,000	ESRP	SRFB, PSAR
ss	Carr Inlet (3) bulkhead removals	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB
ss	Anderson Island (5) bulkhead removals	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB
ss	McNeil Island bulkhead removal	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB
ss	Case Inlet (5) bulkhead removals	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB
ss	McNeil Island tidegate removal	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB
ss	Oro Bay (3) bulkhead removals	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB
ss	Drayton Passage (2) bulkhead removals	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB
ss	Filucy Bay Enhancement	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB
ss	Filucy Bay Dock & Pier removal	restore nearshore processes	nearshore habitat protection	nearshore	restoration		Chinook	coho,cutthroat, chum	conceptual			design				2012	SPSSEG	\$200,000		SRFB

Habitat Project Monitoring																					
ss	Nearshore project effectiveness	project effectiveness monitoring	NA	NA	NA	NA	all salmonids		conceptual	develop		implement	\$40,000	on-going	\$40,000	2017	SPSSEG, Kitsap DCD	\$80,000		PSAR, ESRP	
Total Non Capital Need:													\$414,500		\$3,110,880			\$643,000		\$9,897,500	\$2,332,500
Priority Projects and Programs	Benefiting Non-Listed Species																				
ss	Little Minter Fish Passage	replace culvert w/ bridge	fish passage, stream morphology	riparian	fish passage	2 mile spawning habitat	coho, chum	Chinook, steelhead, cutthroat	partially designed	design, permit	\$20,000	construction	\$160,000	close out	\$10,000	2011	SPSSEG	\$190,000	\$28,500	PSAR/SRFB	
ss	Ray Nash Creek Restoration	resize 3 culverts, remove invasives	fish passage, invasives, riparian cover	riparian	fish passage, riparian planting	2000 ft stream	coho, chum	cutthroat	conceptual	planning		design	\$20,000	permit, construct?	\$50,000	2011	Pierce CD, SPSSEG	\$70,000	\$10,000	FFFP, CSF	
ss	Warren Creek Fish Passage	restore fish passage	fish passage	riparian	fish passage	.5 mile	coho	cutthroat, chum	on County TIP	construction	\$500,000					2012	Pierce Co.	\$500,000		Pierce County	
ss	Goodnough Ck.culvert replacements	restore fish passage and habitat at mouth	fish passage, nearshore functions	riparian	fish passage	.5 mile	coho	cutthroat, chum	conceptual	planning		design	\$25,000	construct				\$580,000	\$100,000	Pierce Co.	